

# **USER GUIDE**

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# CardStudio<sup>™</sup> 2.0 User Guide Introduction



### CardStudio<sup>™</sup> 2.0 User Guide Introduction

CardStudio<sup>™</sup> 2.0 is a full-feature card design and printing software application with complete capabilities for card design, data management and card production. CardStudio is provided in four editions: Classic, Standard, Enterprise and Professional. All four editions integrate the required features for ID card design and production.

#### Classic:

CardStudio 2.0 Classic edition allows you to design and print professional photo IDs and other type of card designs with a new easy-to-use interface with design and print features.

#### Standard:

CardStudio 2.0 Standard edition allows you to create, manage and print high grade card designs with a new easy-touse interface with design, data management and print features. Including internal database, Excel and .csv file integration for ID records, 2D bar codes and advanced print functionality.

#### Enterprise:

Designed for enterprise applications, the CardStudio 2.0 Enterprise edition allows you to create and print professional photo IDs and other type of card designs with a new easy-to-use interface with design, data management and print features. Including internal database, Excel and .csv file integration for ID records, 2D bar codes and advanced print functionality. Enterprise edition includes advanced features to connect to multiple databases, ODBC data sources and multiple projects, for advanced card design, issuance and data management capabilities.

#### Professional:

Created for advanced enterprise applications that require smart card encoding support, CardStudio 2.0 Professional edition allows you to create, print and encode professional card designs with a new easy-to-use interface and design and print features. Including internal database, Excel and .csv file integration for ID records, 2D bar codes and advanced print functionality. Professional also offers the advanced features to connect to multiple databases and ODBC data sources, and multiple projects for advanced card design, issuance and data management capabilities.

CardStudio<sup>™</sup> 2.0 is desktop-based card production software developed to design card layouts, manage, add or import card data, capture photo's and signatures as well as one-click printing, making the card production process quick and easy.

CardStudio<sup>™</sup> 2.0 is a combination of two specific modules that each have their own area of expertise. DesignStudio focuses on creating perfect card layouts and PrintStudio can handle your data with the ease of well-known spreadsheet software.

DesignStudio gives you the all the needed tools to create a front and back design with images, **logo's**, shapes and dynamic data. You will be able to create a template with placeholders that help determine the layout of dynamic data. For example: where a passport photo should be placed, a signature or the first and last name of a person.

As a user, you can manage data and layouts for different types of ID cards using different types of printers. PrintStudio gives you the basic tools to import, add and manage data like card holder information, passport photos and signatures. This data can then be connected to a card design or multiple card layouts and selected for printing. CardStudio<sup>™</sup> 2.0 imports and prints large amounts of data and cards and makes your card production process faster and more efficient.

Any Windows PC with a network connection can be used to install CardStudio<sup>™</sup> **2.0**. This PC needs to have an internet connection to download the installation file, register the software and keep the software up to date with automatic updates.

This manual does not describe the installation of printers or other peripherals like a camera or signature pad. Please refer to the **manufacturer's** manuals for further information on these devices. Before working with the software, first install the Zebra Windows printer driver so the Zebra Printer is ready to print cards.



# CardStudio<sup>™</sup> 2.0 User Guide General Information



### CardStudio<sup>™</sup> 2.0 User Guide General Information

It is essential, when you or your organization choose CardStudio<sup>™</sup> 2.0 for your card design, data management and card production, to make sure to have the correct hardware to install the software on. We strongly advise a Windows PC for installation, that creates an optimal work environment for the CardStudio<sup>™</sup> 2.0 software and supports the correct peripheral devices like card printers.

#### Specifications

Minimum Hardware specifications Processor Intel Pentium Dual core G640 2,8 Ghz or equal Memory 2GB Free Disk space 4GB Graphics 1024 x 768 Monitor/Mouse/keyboard 3 available USB ports (printer/webcam/signature pad) Software

Supported Operating Systems: Windows 7 (32 bit & 64 bit) Windows 8.1 (32 bit & 64 bit) Windows 10 (32 bit & 64 bit)

.NET Framework version: 4.7.0



#### Supported Printers

Updates for support of new printers are added regularly by means of automatic software updates.

Manufacturer	Туре	Single sided	Double sided	Batch Printing	True Black	Print job Preferences	Contactless Encoding	MAGstripe Encoding	Remark
Zebra	ZXP Series 1	~	-	~	~	✓	-	✓	
Zebra	ZXP Series 3	×	×	~	~	✓	✓	✓	
Zebra	ZXP Series 7	~	×	✓	~	✓	✓	✓	
Zebra	ZXP Series 8	~	×	~	✓	✓	~	✓	
Zebra	ZXP Series 9	×	×	×	×	✓	×	✓	
Zebra	ZCL10	×	×	×	×	✓	-	-	
Zebra	ZC100	×	-	×	×	✓	-	-	
Zebra	ZC300/ 350	×	×	×	1	✓	×	✓	

# CardStudio<sup>™</sup> 2.0 User Guide Installation



### CardStudio<sup>™</sup> 2.0 User Guide Download and Install

#### Download the CardStudio<sup>™</sup> 2.0 Software

Download the latest version of the CardStudio<sup>™</sup> 2.0 at:

https://cardstudio.zebra.com

or use the optional "USB Card-Drive" if provided.

The link will download the installer file that will look like this:



Double-click the icon to open a pop-up verifying you are sure you would like to run the installer. Click 'Run' to start the CardStudio<sup>™</sup> 2.0 installation wizard.



A. If you would like to run the installer and setup CardStudio<sup>™</sup> 2.0 on your system, click the "Run" button. If you do not want to install CardStudio<sup>™</sup> 2.0, click on the "Cancel" button.

B. Click on the "Next" button to continue the installation of CardStudio<sup>™</sup> 2.0.

🚅 CardStudio Setup	×
्री•• ZEBRA	Welcome to the CardStudio Setup Wizard
	The Setup Wizard will install CardStudio on your computer. Click "Next" to continue or "Cancel" to exit the Setup Wizard.
CardStudio <sup>™</sup> 2.0	
	< Back Next > Cancel



C.1 The "Features" tab: The third step in the installation process is to select how you would like to install CardStudio. You can select the features you would like to install. DesignStudio, PrintStudio, Demo projects and the SmartCard Editor are selected by default. If you would like to only install PrintStudio or DesignStudio, just un-check the boxes of the features you do not want to install.

🚅 CardStudio Setup		×
Configure how CardStudio will be inst	alled	
Features Installation Folder		
Select the features to be installed		
Advanced Installer —	< Back Next >	Cancel

C.2 The "Installation Folder" tab: The second tab of the third step is to select the location where you would like to install CardStudio<sup>T</sup> 2.0. You can select this by clicking on the browse button and browse to the desired location. If you do not have a specific location for CardStudio<sup>T</sup> 2.0 leave the default location.

_	udio Setup ure how CardStudio will be	e installed			×
Featu	res Installation Folder				
ent	dStudio will be installed on you er it below or click "Browse". \Program Files (x86)\Zebra\Ci		. To install t	o a different lo	Browse
Tota	al space required on drive:	122 MB 325 GB			bionacia
Advanced 1	installer ————		< Back	Next >	Cancel



D. The installer is now ready to begin the CardStudio<sup>™</sup> 2.0 installation. Click the "Install" button to begin the installation. If you want to review or change any of your installation settings, click on the "Back" button. Click "Cancel" to exit the installer.

🚅 CardStudio Setup	×
Ready to Install The Setup Wizard is ready to begin the CardStudio installation	•=
Click "Install" to begin the installation. If you want to review or change any of your installation settings, dick "Back". Click "Cancel" to exit the wizard.	
Advanced Installer	cel

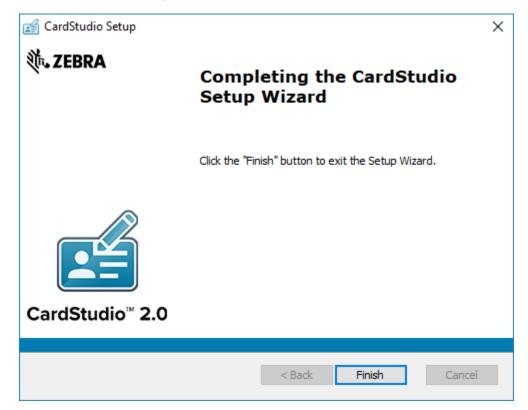
E. The installation is now in process. This may take a couple of minutes.

A pop-up window will appear to make sure that you want to run the installation. Click "Yes" to continue.

🚅 CardStudio Se	tup	×
Installing Ca	rdStudio	
Please wai minutes.	t while the Setup Wizard installs CardStudio.This may take several	
Status:	Extracting files from archive	
Advanced Installer		
	< Back Next >	Cancel



F. The installation is complete click the "Finish" button to exit the installer.



G. After completing the installation, 3 shortcuts will appear on your desktop.

For CardStudio<sup>™</sup> 2.0, only DesignStudio and PrintStudio are needed. When installing CardStudio Classic only one desktop icon will appear, only DesignStudio is needed. If you have CardStudio Standard or above, you will have 2 or 3 desktop Icons.

If you would like to start creating a new card layout, double-click on the "DesignStudio" icon:

If you would like to start a project and add card data, double-click on the "PrintStudio" icon:



DesignStudio

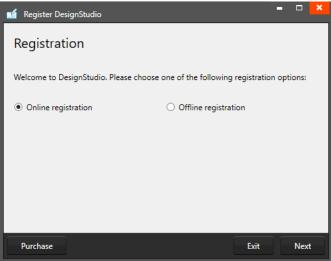
If you would like to start the SmartCard Editor to create an encoding file, double-click on the "SmartCard Editor" icon:

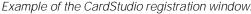


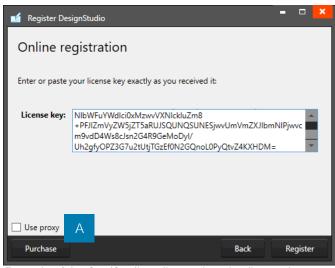
Before you start CardStudio<sup>™</sup> 2.0, a license key is needed for the registration of an edition.



When DesignStudio or PrintStudio starts for the first time, a registration window will pop-up, this is where the license key can be entered, and the CardStudio Software activated.







Example of the CardStudio online registration license key window with License Key entered.

💅 Register Desigi	nStudio												×
Evaluation	versio	on											
This is a 14-day e purchase a license						ition	perio	od ha	is exp	oired,	you	mus	t
Day 1 of 14													
You have 13 uniqu license key.	ue days of	free ev	aluatio	on lef	t. Clic	k the	e Pur	chas	e but	ton t	o ob	tain a	3
Purchase	Activa	te										OK	

Example of a successful online registration of a CardStudio demo key.

#### Registration of the Software

The first question will be about online or offline registration. Select 'online registration'.

The license keys are for online registration. No access to the internet to activate your license keys? Contact your local reseller for more information on offline license keys.

**Online Registration** 

You will be requested to enter a license key. The license key will be provided by our License Manager. The license key must be entered (copy-paste), when the key is valid, the software will start. The next time the software will not require the license key to be entered.

Test keys can have a time restriction and may expire on a given date. (View the License Manager User Guide for more information on license keys).

A. Check the "Use Proxy" box and enter the information needed to connect through a Proxy server in your network.

Use proxy								
Proxy url: proxy-server-url.com								
Username: user	Password:	pass	Domain:	domain				

#### Successful Registration

When you copy-paste the correct key you will see that the registration is successful. In this case it is a demo key that shows the evaluation time. Click the "Ok" button to start working with CardStudio.

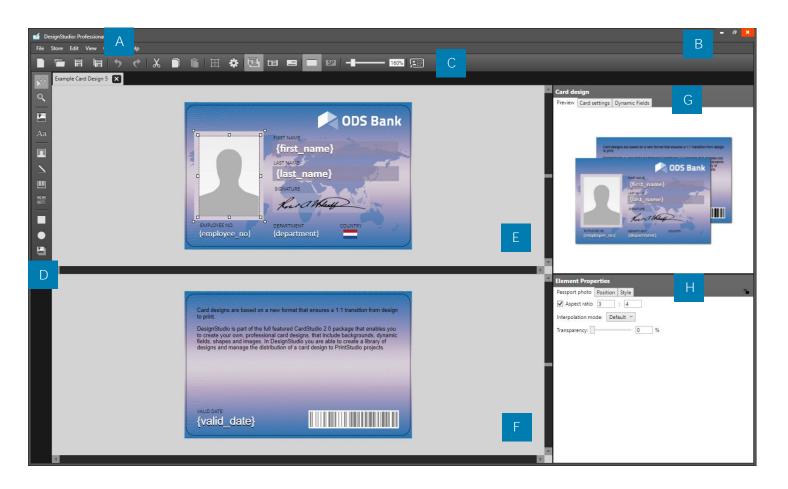


# CardStudio<sup>™</sup> 2.0 User Guide DesignStudio





### **DesignStudio** Interface



- A. Main menu
- B. Window menu
- C. Quick menu
- D. Toolbar
- E. Workspace/Canvas Front
- F. Workspace/Canvas Back
- G. Card Design: Preview / Card Settings / Dynamic Data Fields
- H. Element Properties



# **DesignStudio** Navigation

DesignStudio makes the card design process as easy, fast and intuitive as possible. Accommodating the users in your organization, set with the task of designing the ID-cards. Using a user-friendly overview that shows all the tools needed and is easy to navigate.

#### Window navigation

The window navigation gives the option to A. minimize, B. maximize or C. close.



#### Main Menu

The main menu offers the options: "File", "Store", "Edit", "View", "Options" and "Help"

File Store Edit View Options Help	File	Store	Edit	View	Options	Help
-----------------------------------	------	-------	------	------	---------	------

The main menu offers 4 sub-menus.

#### File

The first button offers the main functions needed to start, use, save and end CardStudio Design:

File Store Edit View Options Help	
New Card design	Ctrl+N
Open Card design	Ctrl+O
Import Card design	
Import BadgeCreator design	
Import CardStudio 1.0 design	
Import IDPro7 design	
Save Card design	Ctrl+S
Save Card design as	Ctrl+Shift+S
Export Card design	
Print card	
Print card with: Zebra ZXP Series 9 USB Card Printer (Copy 1)	Ctrl+P
Exit	

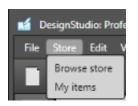
New Card design:
Create a blank new layout for your ID card or use CTRL+N
Open Card design:
Open an existing card design to adjust or use CTRL+O
Import BadgeCreator design:
Import designs created in BadgeCreator.
Import CardStudio 1.0 design:
Import designs created in CardStudio 1.0.
Import IDPro7 design:
Import old designs created in IDPro7.

- Save Card design: To save a Card Design click here or use CTRL+S.
- Save Card design as: To save a Card Design using another name click here or use CTRL+Shift+S. It is also a simple way to create a duplicate of your design.
- *Export Card design:* Card designs can be exported from Design Studio as a zip file, ready to send or upload.
- *Print card:* The Classic Edition allows you to print your design from DesignStudio. Click to select a printer, set preferences and print.
- *Print card with:* When a default printer is setup, you can skip the printer preferences and print directly with the default printer. Click here, use the printer button in the quick menu or use CTRL+P.
- Exit: This button will let you exit DesignStudio.



#### Store

The second button offers the DesignStudio Store, you can find different types of example card designs ready to place in "My items" and download. Use the example card designs to get inspired or adjust for own use.



*Browse store*: Open the store with a selection of card designs for you to choose from. *My items*: Overview of your selected card designs from the store, ready to download and use.

#### <u>Edit</u>

The third button will offer all the edit functions that you use during the design process:

💅 DesignStudio: ProfessionalDemo				
File	Store	Edit View	Options	
	Е	Undo	Ctrl+Z	
-		Redo	Ctrl+Y	
Ń	Exam	Cut	Ctrl+X	
		Сору	Ctrl+C	
4		Paste	Ctrl+V	
2		Bring To Front		
		Bring Forward		
Aa		Send Backward		
		Send To Back		

- <i>Undo:</i> Undo	previous de	sign steps.	You can use th	ne short cut CTRL+Z.

- *Redo:* Redo design steps you undid CTRL+Y.

- *Cut:* To relocate an object (image, text, placeholder) on the canvas use the cut button. You can use the short cut CTRL+X.

- *Copy:* To copy an object (image, text, placeholder) on the canvas use the copy button. You can use the short cut CTRL+C.

- *Paste:* To paste a copied or cut object (image, text, placeholder) on the canvas use the cut button. You can use the short cut CTRL+V.

- Bring To Front: To bring an element to the front of the design.

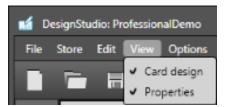
- Bring Forward: To bring an element one step forward in the design.

- Send Backward: To send an element one step backward in the design.

- Send To Back: To send an element to the back of the design.

#### View

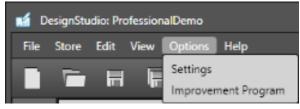
The fourth button controls the CardStudio dashboard view, make specific views visible or invisible:



*Card Design*: See the design preview, card settings and the dynamic fields. *Element Properties*: Adjust the different type of elements by clicking on an element and use the Element Properties to make changes.

#### <u>Options</u>

The fifth button controls the CardStudio dashboard view, make specific views visible or invisible:

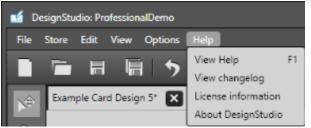


Settings: Change Design Studio settings like enabling the grid, changing the language or the path to save card designs to.
Improvement Program: Help optimize the quality of DesignStudio, by participating anonymously in the DesignStudio Improvement Program.



#### <u>Help</u>

The Help button offers information about DesignStudio and an online user guide:



- View Help: Opens the online user guide or use the shortcut F1.

- *View changelog:* Shows the changes and updates made in the software.

- *License Information:* Shows the specific license information, the edition, the reference, versions and activation date.

- About DesignStudio: Pop-up with version and developer information.



#### Quick Menu

The Quick Menu offers a selection of large visual buttons often used in the card design process, allowing **for quick and easy navigation**.



A. <u>Create new Card design</u> Starts a new Card design.

B. Open existing Card design

Open an existing Card design.

C. Save

It is important to save your layout while designing. Quickly saves the card design.

#### D. <u>Save as</u>

Saves your design under another name.

E. <u>Undo</u> Undo design steps you made.

#### F. <u>Redo</u> Redo design steps you made.

#### G. <u>Cut</u>

To place an element somewhere else, use this button to cut and replace the image. Just select the element you want to replace, click on the cut button and then click on the paste button to place it somewhere else.

#### H. Copy

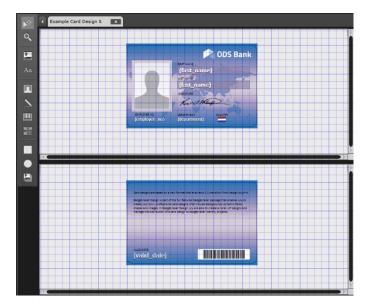
To copy elements, select the element, then click on the copy button. The element is ready to be pasted anywhere on the front or back of the design canvas.

#### I. Paste

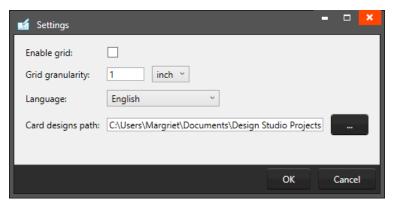
If you cut or copy an element, click on the paste button to place the element on the front or the back of the canvas.

#### J. Show/hide grid

Make a grid visible or invisible. A grid can help you be more precise with your design. Having the grid to align elements. When the grid option is selected it will auto-snap elements in place whilst using your mouse. Once placed, the arrow keys allow free movement of elements.







- Check or uncheck the enable grid checkbox to enable or disable the grid.
- Determine the scale of the grid.
- Set the language used in the designer. Languages supported: *English, French, Spanish, German, Polish and Dutch.* Other languages will be supported soon.
- Determine your own project path, where you would like to open and save your designs.
- To confirm settings, click "OK", to cancel settings, click "Cancel".
- To exit settings, click "X".

#### L. Show front and back designers

View the canvas for the front and back side of the layout.

M. Show front designer only

View the canvas for the front side of the layout.

N. Show back designer only

View the canvas for back side of the layout.

#### O. Design layer

This is the base layer to work in to design your (YMCK or monochrome) card layout.

#### P. Specialty panel

This is a specialty panel to work in if you want your specialty panel (like an pearl panel) to a have a certain design or pattern. (Be aware that a specific printer and ribbon are needed to add specific layers with a design or pattern.)

#### Q. <u>Scale slider</u>

Use this slider to zoom the canvas view in or out.

#### R. Print Card Design

This Quick menu button is only available in the CardStudio CLASSIC edition and allows you to add one record of data and print your card design from Design Studio. You can only use Zebra printers to print you card designs.

#### S. PrintStudio

This Quick button lets you open PrintStudio and continue with your card production process.



# DesignStudio Start a Card Design



### **DesignStudio** Start a Card Design

To start and work on a card design, start a new design or open an existing design.

New Card Design A. Go to "File" in the main menu and click on "New Card design". Or click on the icon below in the quick menu:



🛒 DesignStudio File Edit View Help А New Card design Open Card design Ctrl+O Import BadgeCreator design Import IDPro7 design Save Card design Ctrl+S Save Card design as... Ctrl+Shift+S Print card Print card with: ... Ctrl+P Exit

When clicking on the new card design link or button a setup window will pop-up.

Mew Card design	• ×
Name: A	
Size: ID-1 / CR80 B 3.375 x 2.125 inch ~ C	
Card configuration       Single sided       Magstripe	
Front side	
Color O Mono D Specialty layer     Secialty layer     Landscape O Portrait	
Back side	
G Color O Mono D Specialty layer G Landscape O Portrait	
Create Card design Ca	ancel

Fig. Example of new card design setup window.

- A. Enter the name for the layout. The exclamation mark at the end appears when the field is not filled, or the name already exists. The 'OK' button is not accessible until a unique name is given.
- B. The size of the card can be chosen from a drop down.
- C. Define a custom size for your layout.
- D. Check this box if the design is single sided.
- E. Check this box if the design is for a card with MAGstripe.
- F. Check the ribbon type (color or mono), the orientation of the design for the front and the type of layers.
- G. Check the ribbon type (color or mono), the orientation of the design for the front and the type of layers.

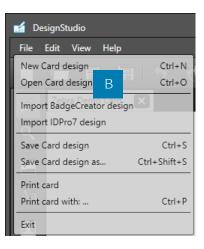


#### Open existing Card Design

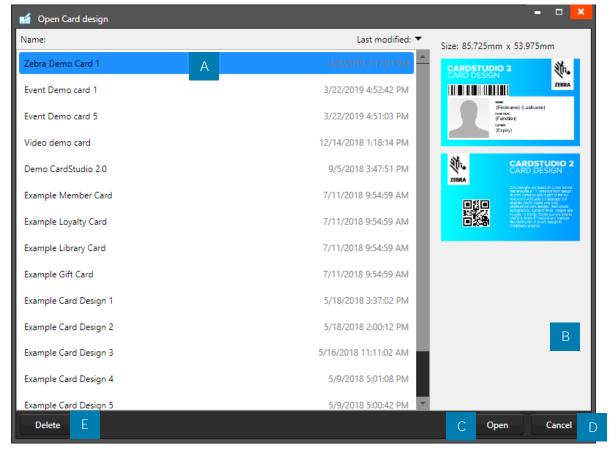
B. To open an existing Card Design go to "File" in the main menu and click on "Open Card design".

Or click on the icon below in the quick menu:





When clicking on the new card design link or button, a selection window will pop-up. All available existing designs are displayed, select a layout for editing. You can open multiple layouts at the same time.



Example of the Open Card design pop-up window.

- A. Select one of the existing designs.
- B. View the layout of the design selected.
- C. Open the selected design.
- D. Cancel opening a design.
- E. Delete a selected design.

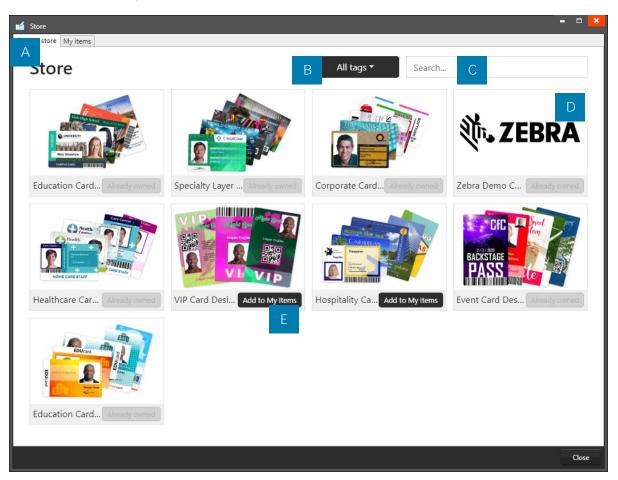


# **DesignStudio** Card Design from the Store

Browse the Store to select and download one of the example card design to start with. Get inspired and adjust the example designs to your own liking.

#### Browse the Store

To browse the store, go to "Store" in the main menu and click on "Browse store".



- A. Store: Overview of all the card design bundles available to select and available add to "My items"
- B. Filter the overview of card designs by specific tags. Use the drop-down button to select a tag.
- C. Search card design bundles by name.
- D. Click on the bundle image to learn more about the bundle and its card designs.

	Zebra Demo Cards	×
CARDESTUDIO 2 CARDESTUDIO 2 CREDESTUDIO 2 CREDES	A collection of Zebra example card designs in the Z style. Zebra	ebra
Contents • Zebra Demo Card 1 (CardDesign) • Zebra Demo Card 2 (CardDesign) • Zebra Demo Card 3 (CardDesign) • Zebra Demo Card 4 (CardDesign) • Zebra Demo Card 5 (CardDesign)	E Already (	

E. Click on "Add to My items" to add the collection of card design and make them available for download.



#### My items

All the selected card designs added from the Store can be found in the "My items". These card designs will always be available for you as specific customer ready for download.

Browse state       My ritema       From product         Item name       Card design       Zebra Demo Card 1       Card design       Zebra Demo Card 2       Card design       Zebra Demo Card 3       Card design       Zebra Demo Card 4       Card design       Zebra Demo Card 5       Card design       Zebra Demo Card 5       Card design       Zebra Demo Card 5       Card design       Heathcare Card Designs       Item name	🖬 Store		×
Item name Card design     Zebra Demo Card 1 Card design   Zebra Demo Card 2     Zebra Demo Card 3 Card design   Zebra Demo Card 4   Zebra Demo Card 4   Zebra Demo Card 4 Card design   Zebra Demo Card 5 Card design   Zebra Demo Card 4 Card design   Zebra Demo Card 5 Card design     Healthcare Card Designs   Hospital Employee ID 2   Card design   Healthcare Card Designs   Care Worker   Card design   Healthcare Card Designs   Care Worker Portrait   Card design   Event Demo card 2   Card design   Event Demo card 3   Card design   Event Demo card 4   Card design   Event Demo card 5   Card design   Event Demo card 6   Card design   Event Demo card 7   Card design   Event Demo card 8   Card design   Event Demo card 9   Card design   Event Demo card 1   Card design   Event Demo card 3   Card design   Event Demo card 4   Card design   Event Demo card 5   Card design   Event Demo card 6   <	Browse store My items		
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- A. My items: overview of all the selected card designs from the Store ready to select and download.
- B. Preview images of the selected card design.
- C. Click on "Download" if you would like to download the selected card design to your Design Studio. Give the downloaded card design a name.

💉 Save A	S	-		×
Name:	Zebra Demo Card 1			
	Save as		Cance	
			Jamee	

After saving the design is opened automatically in DesignStudio. The card design is now ready be used in your CardStudio 2.0.

D. Click on the "Close" button to close the My items pop-up.



# DesignStudio Card Design View

Preview, Card Settings and Dynamic Field



# **DesignStudio** Card Design Menu

The Card Design window presents three tabs: Preview, Card Settings and Dynamic Fields.

#### Preview

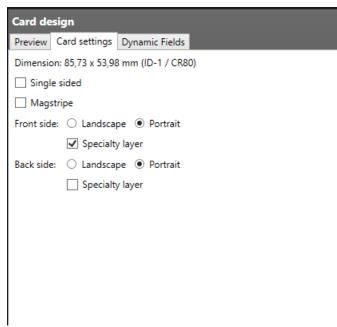
The Preview tab shows a preview of the card; the preview allows you to toggle from front to back by clicking the image.



Example of the Preview tab in the Card Design view.

#### Card settings

The Card Settings tab offers information on the card design settings. Change or edit the settings of the card design. The elements already placed will not be affected, when for example changing a layout from landscape to portrait.



Example of the Card Settings tab in the Card Design Menu.



#### **Dynamic Fields**

With the start of a new card design it is important to create the needed dynamic fields for a card design. Dynamic data represents data that need to be on a card design for different card holders. For example: First name, Last name or Department. When dynamic data is linked to project data, the dynamic data placeholder will be replaced with the card holder data.

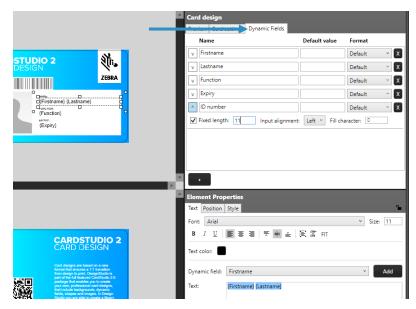


Fig. Example of the Dynamic Fields settings tab in the Card design menu.

**Card design** Preview Card settings Dynamic Fields Default value Name Format Firstname R X  $\cap$ v Default D v Lastname Default v Function Default X v Expiry Default Х ^ ID number Default X ✓ Fixed length: 11 Input alignment: Left ~ Fill character: 0 Ε А

- A. Add a new dynamic field to the list by clicking on the "+" button.
- B. Enter a dynamic field name by clicking on it and rename it from, for example, "Dynamic Field 1" to "first\_name".
- C. It is possible to enter a default value for the fields. For example, the default value for "department" can for example be "Sales".
- D. A dynamic field can have a certain format, the dropdown menu offers a couple of options. For example, the value of a certain dynamic text field needs to be "CAPITALIZED".
- E. It is possible to give dynamic fields a fixed lenght, input alignment and a fill character. This helps when the dynamic data has to be a specific fixed lenght, for example ID numbers or for specific Magstripe input. Click on the arrow before the dynamic field to open the extra options. The fixed lenght gives the option to set the number of characters, input alignment allows you to set the input from left or right and fill character lets you fill the empty space with a specific character.
- F. Click on the "X" button to delete a dynamic field.



The tab "Dynamic fields" in the card design view will give a list of the dynamic fields in the layout. When a text element is added to the card design, and the text in the text element has a name {between curly braces}, DesignStudio will detect this as a dynamic field name and will be added to the list of Dynamic fields.

The user can delete, change and edit the field names and enter default values to be used as preview.

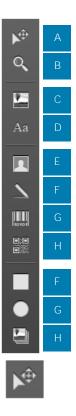
# DesignStudio Elements



# **DesignStudio** Elements

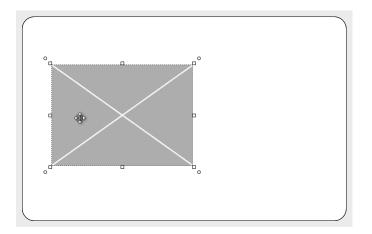
Element Tool Menu

To create and edit a design you need to work with the toolbar setup on the left side. The tool bar offers the following functions:



#### A. Select/move tool

The arrow tool is used to select an element. This tool also allows you to move an element in the layout. When an element is selected a move icon appears on the mouse over and can be used to move or resize an element.

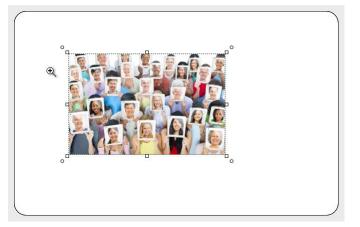




#### B. Zoom tool

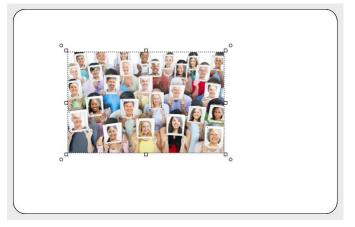
The zoom function is enabled and will zoom in on the layout.

At a click of the mouse the zoom is increased one step, when using CTRL and a click of the mouse the zoom is decreased by one step.



#### C. Image tool

The image tool is used to place an image element in the layout.



#### D. <u>Text tool</u>

The text tool can be used to add static and dynamic text to the design. Use the Text Element properties to edit and add text and/or dynamic text to the box. Select the element and go to Element properties to edit the text in the text editor.

○	0	
enter text here		

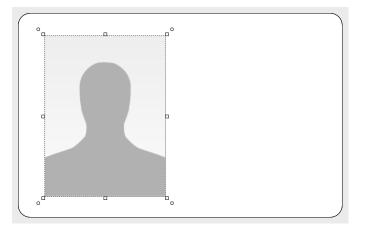


Aa



#### E. Passport photo tool

The Photo element is used to place a placeholder for the passport photo on the layout. The photo element can scale within proportions. When the design is linked to data in for example a PrintStudio project, the placeholder will be replaced by a real passport photo from the project data.





# F. Signature tool

The Signature element is used to place a placeholder for the signature on the layout. The signature element can scale within proportions. When the design is used and connected to data in for example a PrintStudio project, the placeholder will be replaced by a real signature from the project data.

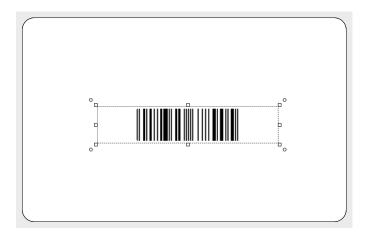
of Kour A Mary





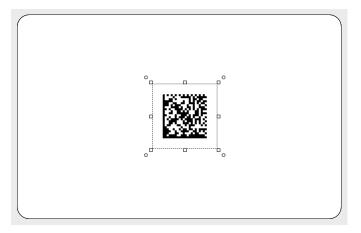
# G. Barcode tool

The Barcode element is used to place a placeholder for a barcode on the layout. The element can scale within proportions. Different types of barcodes are available to select in the element properties. Barcodes that are scaled too small might not work. Test barcodes in your design with the data before continuing.



#### H. 2D Barcode tool

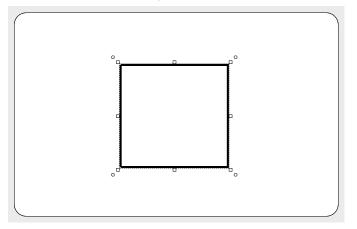
The 2D Barcode element is used to place a placeholder for a 2D barcode on the layout. The element can scale within proportions. When the design is linked to data in a PrintStudio project, the placeholder will be replaced by a real 2D barcode. There are different types of 2D barcodes available to select in the element properties.





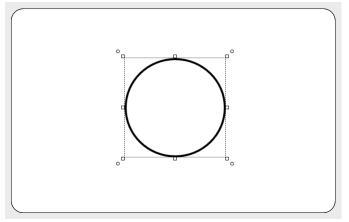
#### I. Square tool

The rectangular element can be used for frames and boxes in the layout. Line option: To draw a line with the square tool, select the square element and go to the element properties. Enter the desired height and width of the line. Switch to the Style tab, set border thickness to 0 and add the background color of your choice.



### J. Circle tool

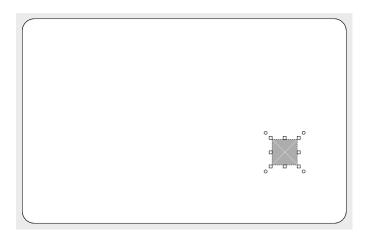
The circle element is used for elements like circles and ellipsoids.



#### K. Dynamic logo tool

The Dynamic logo element is used to place a placeholder for a dynamic logo on the layout. The element can scale within proportions. When the design is linked to data in a PrintStudio project the placeholder will be replaced by one of the dynamic logos.

For more explanation on the dynamic logo read Dynamic logo element properties.

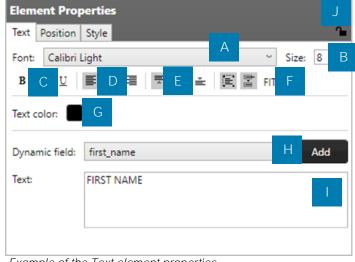




# **Element Properties**

The element properties window has three tabs: Element edit, Element position and Element style tab.

Depending on the type of element, this tab will allow the user to view and/or edit the information of the element. When the values are changed, they are reflected immediately in the design; there is no need to hit an enter button. The user can make changes in one window and observe the result in the other window at the same time and vice versa. It depends on the preference of the user to create the layout in a graphical environment or a data element environment.



Example of the Text element properties

### Text element properties

- A. Change Font
- B. Change Size
- C. Edit style into bold, *italic* and underlined.
- D. Outline the text left, center or right
- Ε. Align the text to top, center or bottom of the box.
- Wrap text automatically, let text be cut of when being too F. long or set the text to automatically fit the text box.
- G. Change text color by clicking the Text color box
- H. Choose to add a dynamic field to the text box below by selecting one from the drop-down menu and clicking on the "Add" button.
- I. Enter all your text here.
- J. Click the lock icon to lock an element. A locked element cannot move or be selected during the design process.

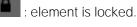


element is not locked.











# Image element properties

- A. Select an image from your computer by clicking on the "Select Image" button.
- B. Choose to bind the ratio
- C. As a specialty feature you are able to use the "Interpolation mode" to control image quality during scaling. There are 4 interpolation modes you can choose from:
  - Default **Bicubic** Bilinear NearestNeighbor

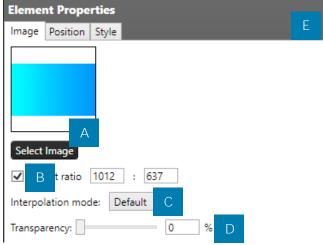
Keep this setting "Default" when you do not have experience with the interpolation modes.

- D. Use the slider or enter a percentage to change the transparency of the image.
- E. Click the lock icon to lock an element, so it cannot move during the design of the card.



element is not locked.

element is locked.



Example of the Image element propertes



Element Prop	erties		
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Interpolation mo	ode: Default Y B		
Transparency:	0 % C		
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Example of the Passport Photo element properties

# Passport Photo element properties

- A. Check box to bind the element to a certain ratio or adjust the ratio.
- B. As a specialty feature you are able to use the "Interpolation mode" to control image quality during scaling. There are 4 interpolation modes you can choose from:
  - Default Bicubic Bilinear
  - NearestNeighbor

Keep this setting "Default" when you do not have experience with the interpolation modes.

- C. Use the slider or enter a percentage to change the transparency of the image.
- D. Click the lock icon to lock an element, so it cannot move during the design of the card.



element is not locked.

: element is locked.

Element P	ropertie	es	B
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Interpolatio	n mode:	Default 👻 📙	
Transparenc	y:	0 % C	

Example of the Signature element properties

# Signature element properties

- A. Check box to bind the element to a certain ratio or adjust the ratio.
- B. As a specialty feature you are able to use the "Interpolation mode" to control image quality during scaling. There are 4 interpolation modes you can choose from:
  - Default
  - Bicubic
  - Bilinear

NearestNeighbor

Keep this setting "Default" when you do not have experience with the interpolation modes.

- C. Use the slider or enter a percentage to change the transparency of the image.
- D. Click the lock icon to lock an element, so it cannot move during the design of the card.



: element is not locked.

: element is locked.



Element Properties	G
Barcode Position Style	
✓ Aspect ratio 5 : 1 A	
Barcode type: UPC-A B Error checking:	C *
✓ Fit to width D	
Show label	
Dynamic field: Firstname F v	Add
Value: {ID number}	

Example of the barcode element properties.

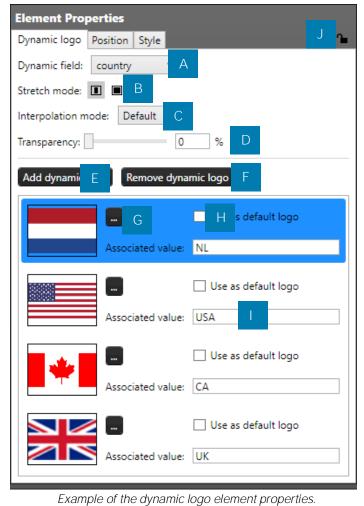
# Barcode element properties

- A. Check this box to bind the element to a certain ratio
- B. Choose a barcode type by clicking on the drop-down menu and select the barcode type.
- C. Select a form of error checking from this list to ensure a correct working barcode.
- D. Check this box to fit the barcode to the complete width.
- E. If you want the barcode to show a label with the actual data, check the show label check box.
- F. Select the dynamic field that you want the barcode to reflect, click the "Add" button to add the dynamic field to the value. Barcodes cannot represent all data, make sure the data can be translated to the selected barcode type.
- G. Enter a default value or combine it with a dynamic field.
- H. Click the lock icon to lock an element, so it cannot move during the design of the card.



: element is not locked.

: element is locked.



Dynamic logo element properties

- A. Select the dynamic field that needs to reflect the dynamic logo.
- B. Select if you want the logo to be the correct ratio or if you want it to fill the whole field.
- C. As a specialty feature you are able to use the "Interpolation mode" to control image quality during scaling. There are 4 interpolation modes you can choose from:
  - Default Bicubic Bilinear NearestNeighbor

Ι.

J

Keep this setting "Default" when you do not have experience with the interpolation modes.

- D. Use the slider or enter a percentage to change the transparency of the image.
- E. Click on this button to add another dynamic logo.
- F. When you want to delete a dynamic logo select the logo you want to delete first and then click on the "Remove dynamic logo" button.
- G. Select an image for your dynamic logo by clicking on this button.
- H. Check the default box if you want this image to show up as the default dynamic logo image.

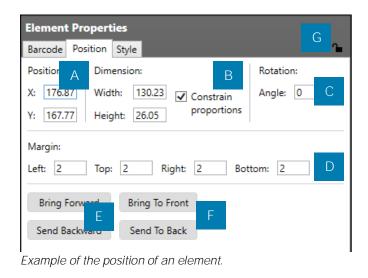
Add the associated value of your dynamic logo into this field.

- : element is not locked.
  - : element is locked.



# **Element Position**

To change the position of an element, use the arrow tool or select the element and click on to the second tab "Position" in the Element properties. Here the position, dimension and margin of an element can be adjusted, rotated or arranged to the back or front.



- A. Determine the position of the used element.
- B. Scale your element giving a width or a height. Check the check-box to constrain proportions.
- C. Rotate the element by entering an angle number, 0 to 360.
- D. Give elements margin space, enter space for the left side, top, right and bottom of the element.
- E. To arrange an element one step forward or backward against the other elements, click on these buttons.
- F. To bring an element completely on top or to the background, click on these buttons.
- G. Click the lock icon to lock an element, so it cannot move during the design of the card.

Increase/decrease the width or height of an element. The arrow appears when the mouse is hovered over/near the

The height and width of the element can be changed at the same time. The arrow appears when the mouse is hovered over/near one of the corners of the element.

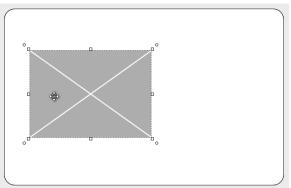
element is not locked.

edge of the element.

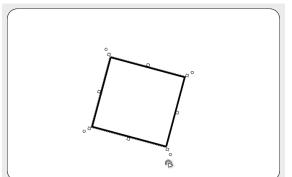
element is locked.

# Resize and rotate elements on the canvas

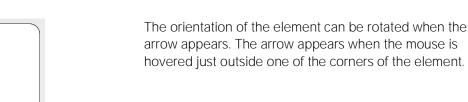
The canvas represents the front and/or back of the card layouts and can be used to place, edit and/or move elements. When an element is selected the size of the element can be changed using the arrows/squares at the corners of the elements. The element can also be rotated using the circles at the corner of the elements.



Example of an image element placed on the front of a card.



Example of a rotated shape element placed on the back of a card.

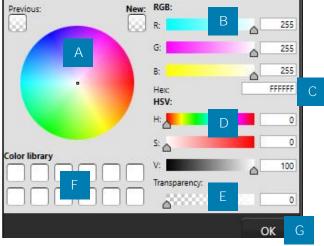


## Border & Background

To change the style of an element, click on the element and go to the third tab "Style" of the Element Properties view.

Element Properties	
Text Position Style	
Border:	А
Thickness: 0 Color:	
Corner radius: 0 Style:	
Background color:	В

Example of the style tab



Example of the Color pop-up menu

- A. Add a border, change the thickness of the of the border, its color or style.
- B. Add a background color.

#### Color & Transparency

Choose a color for the border or the background using the color pop-up window. There is a selection of color options to choose from. Use the RGB, Hex or HSV code to select a specific color. You can use:

- A. The color picker.
- B. Use the RGB sliders or type in the percentage.
- C. Fill in the Hex code for the color.
- D. HSV sliders or type in the percentage.
- E. Add Transparency or type in the percentage.
- F. Use a color library for specific colors. Select an empty slot in the library and set your color using the options
   A E.
- G. Click on "Ok" when you have selected the correct color and transparency of the border or background.



# DesignStudio Print Card Design

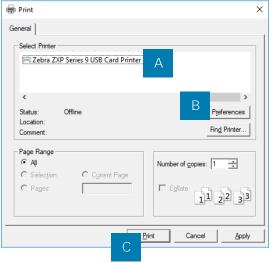


# **DesignStudio** Print a Card Design

With the CardStudio Classic Edition it is possible to design and print your card design from DesignStudio using the Zebra Card Printers. After the design process click on the "Print" button in the Quick Menu:



When a printer is not setup, a printer setup window appears the first time:



A. Select the Zebra Card Printer you would like to print your card design with.

B. Set your printer preferences, make sure the correct default settings of the printer driver have already been set.

C. Click on the "Print" button to proceed. To change the printer settings for the quick menu print button, go to the "File" and click on the "Print card" link.

Before printing the card design it is possible to personalize the Card Design with cardholders' data. For Example, capturing a passport photo. If the card design does not have personlized data, proceed to the print button.

Printing with: Zebra ZXP Series 9	USB Card Printer (Copy 1)
Biometrics	Dynamic fields
Passport photo	first_name
	last_name
	employee_no
	department
	valid_date Select a date 15
	country
	barcode C
	Encryption keys
Capture passport phot Signature	There are no encryption keys used in this Card design
	Print settings
Capture signature	Copies 1 D
	E
	Print Cancel

- A. Passport photo: Capture or add a photo to the card design.
- B. Signature: Capture or add a signature to the card design.
- C. Enter data for the dynamic fields in your card design. It is only possible to enter data for 1 card holder, if personalized.
- D. Enter number of copies to print.
- E. Click on the "Print" button to print your card design.



# CardStudio<sup>™</sup> 2.0 User Guide PrintStudio





# PrintStudio Interface

The dashboard of PrintStudio offers the following sections:

File Edit Recor	rt 1 - PrintStudio rd Options V	ïew Help	Α											B
	。 ぐ   個		¶ ▼ 4⊅		С									
ID number	First n	ame	Last name		Company		Department	Street A	ddress	Postal / Zip				
11000	Adam		Fox	,	Healthcare Center	r	Legal Department	559-942	4 Est Avenue	71850		<b></b>		
11001	Ruth		Hess		Zebra		Customer Service		380, 3629 Vulputate,		n n	CardSt	udio 20	ali.
11002	Ezekiel		Parsons		Zebra		Customer Relations		630, 4632 Ut St.	57633	NAM		4410 2.0	ZEBRA
11003	Hyatt		Fernandez		Zebra		Media Relations	Ар #677	2460 Egestas. Street	34350	Ez	ekiel Parso	ns	
11004	Uta		Gomez	2	Zebra		Legal Department	P.O. Box	396, 2614 Nulla St.	29504	and the second second	Istomer rela	tions	
11005	Vera		Taylor	1	Healthcare Center	r	Human Resources	838-915	4 Nisi. St.	10230		ATURE		22
11006	Althea		Bird		ODS Bank		Legal Department	7269 Ac	Rd.	17850		- Parsas	>	10
1007	Perry		Hood	1	Healthcare Center	r	Sales and Marketin		nsectetuer, Street	18108	202	DATE 0-01-01		
1008	Harriet		Gallegos	1	University		Quality Assurance	1543 Dia	m. St.	76479				
1009	Charde		Forbes	1	Healthcare Center	r	Quality Assurance	3614 A,	it.	D				_
1010	Sydnee		Alston		University		Sales and Marketin	g Ap #423	4341 Nec Av.					G
			21.1				0	2402.1						
		Ezekiel P	arsons Cust	omer Rela	ations			11002	Previous record	Next record		rt photo Signatu	re	
		First name E	zekiel	omer Rel	ations			P.O. Box 630, 4632 1		Next record			re	
		First name E	zekiel arsons	omer Rel	ations		Postal / Zip	P.O. Box 630, 4632 1 57633		Next record			re	
		First name E Last name P Company Z	zekiel arsons ebra	omer Rela	ations		Postal / Zip City	P.O. Box 630, 4632   57633 Sterling Heights		Next record			re	
		First name E: Last name P Company Z Department C	zekiel arsons ebra Customer Relations		ations		Postal / Zip City Region	P.O. Box 630, 4632 1 57633		Next record				
		First name E: Last name P. Company Z Department C Email ri	zekiel arsons ebra Customer Relations sus.Duis.a@nulla.con		ations	×	Postal / Zip City Region Country	P.O. Box 630, 4632 I 57633 Sterling Heights Essex		Next record			re Mit Mark	
		First name E Last name P Company Z Department C Email ri Phone 1	zekiel arsons ebra Customer Relations		ations	×	Postal / Zip City Region Country Birthdate	P.O. Box 630, 4632 I 57633 Sterling Heights Essex 11/02/1980						
		First name E Last name P Company Z Department C Email ri Phone 1	zekiel arsons ebra Customer Relations sus.Duis.a@nulla.con		ations	×	Postal / Zip City Region Country	P.O. Box 630, 4632 I 57633 Sterling Heights Essex 11/02/1980		Next record				
Linoo Adam		First name E Last name P Company Z Department C Email ri Phone 1	zekiel arsons ebra Customer Relations sus.Duis.a@nulla.com -572-352-6849		ations	×	Postal / Zip City Region Country Birthdate	P.O. Box 630, 4632 I 57633 Sterling Heights Essex 11/02/1980			Passpo		re	
11000 Adam		First name E Last name P Company Z Department C Email ri Phone 1 Card status P Card status 1 Last name P Card status 1 Last name P Last na	zekiel arsons ebra Sustomer Relations sus.Duis.a@nulla.con -572-352-6849 No card	11004	11005	~ ~ 11006	Postal / Zip City Region Country Birthdate Number of cards Number of cards 11007	P.O. 80x 630, 4632 0 57633 Sterling Heights Essex 11/02/1980 0	it St.	E		rt photo Signatu		ecorts Trecord select

Example of the PrintStudio dashboard overview

- A. Main menu
- B. Window menu
- C. Quick menu
- D. Grid view
- E. Detail view
- F. Photo slider view
- G. Layout gallery and layout preview
- H. Add and Preview Photo and/or Signature



# **PrintStudio** Navigation

PrintStudio makes the elaborate card design process as easy, fast and intuitive as possible. Accommodating the users in your organization that are set with the task of managing data and printing cards. Using a user-friendly overview that shows all the tools and is easy to navigate.

# Window navigation

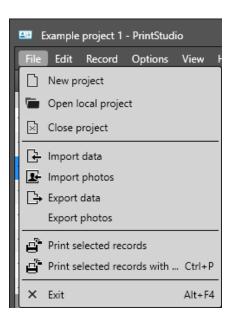
The window navigation gives the option to A. minimize, B. maximize or C. close.

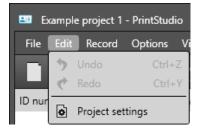


Main menu The main menu offers the options: File, Edit, Record, Options, View and Help



The Main Menu has 6 submenus:





🔤 Example project 1 - PrintStudio						
File	Edit	Reco	ord	Options	View	Не
	-	٦.	Ado	d record		
		6	Del	ete selecte	d record	s

# File

The File menu offers the main functions needed to start, use, manage and exit a PrintStudio Project:

- New project: Start a new project in PrintStudio.
- Open project: Open an existing project made in PrintStudio.
- Close project: Close the Print Studio project.
- Import data: Import data from an Excel file, BadgeMaker 7 or IDPro7 project.
- Import photos: Batch import photos or signatures.
- Export project data: Export the record data to an CSV file.
- Print selected records: Print the records selected in the Grid view.
- Print selected records with...: Print quickly with an already set printer.
- Exit: Exit PrintStudio

# <u>Edit</u>

The Edit menu offers the edit functions and project settings that you use during the data managing process:

- Undo: Undo recent actions made in your project.
- *Redo:* Redo actions you undid in your project.

- *Project Settings:* Change project settings and link card designs to your project.

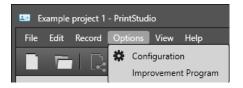
#### Record

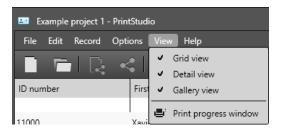
The Record menu give you control over the records being able to add new records or delete existing records.

- Add new record: Add new card holder data, photo and or signature.

- Delete selected record







💷 Example project 1 -	PrintStudio	
File Edit Record	Options View	Help
	< 5	View manual F1 View changelog
ID number	First name	ScreenCheck on the web
		License information
11000	Xavier	<b>i</b> About

# <u>Options</u>

The Options menu brings you to the configurations of the application like date and language settings.

- Configuration

- Improvement Program

# <u>Views</u>

The Views menu makes it possible to make certain views in the main window visible or invisible.

- Grid View
- Detail View
- Photo Slider View
- Print Status Window

# <u>Help</u>

For more information on the application or a user guide click on the Help button.

- View manual
- View changelog
- ScreenCheck on the web
- License information
- About



# Quick menu

When opening PrintStudio two Quick buttons appear in the middle of the interface. The buttons give two options, continue working with an existing project or creating a new project.



The Quick menu offers a selection of large visual button often used in the card production process making navigation quick and easy.

💷 D	emo pr	oject with	database	connect	tion - Prin	tStudio	: Enterpri	ise	
File	Edit	Record	Options	View	Help				
	F	15	<u>्</u> र			T	45	<b>.</b>	
А	В	С	D	Е	F	G	н	1	J

Quick menu view with large visual buttons

- A. <u>New</u> Click to start a new Project.
- B. <u>Open existing Project</u> Click to open an existing project.
- C. <u>Undo</u> Undo actions done working in the project.
- D. <u>Redo</u>

Redo an action that was undone working in the project.

E. Add a new record

Records are single data rows that contain all the information of one person. Click to add a new record to the project. This means putting in new information for a new card holder, adding a photo and if needed adding a signature.

F. Delete a selected record

Records are single data rows that contain all the information of one person. Click to delete the selected record(s) from the project.



## G. Filter records

Have a lot of data in your data grid? This button will be helpful giving you all kinds of different filter options to search for specific groups or a certain person. You can add multiple filter sets. Every filter set can have one or more filter rules. You can combine one or more filter sets to make your search more specific.

💷 Search filter						×
Show only records	s that match the followin	g rules:				
Add filter rule	is is not is more than is more or equal to is less than is less or equal to is between is one of is not one of is empty is not empty	3			4	×
Add filter group	6		8 <b>(</b>	)k	Cancel	7

Example of the filter options window that pop-up after clicking the filter button in the Quick menu.

- 1. To setup a filter rule starts with selecting one of the fields that you want to search in. This will narrow a search and make it faster.
- 2. After selecting the field, you need to select how specific you want to match the field with the criteria in field 3. If the value is very specific choose "is", if you do not want it to be too specific you can choose "Starts with".
- 3. Enter the information you are looking for depending on a specific search or a group search. For example, you could enter a complete index number to find a certain person or just the start of a number.
- 4. The "X" buttons are to delete a filter rule or a filter set.
- 5. Click on this button to add a new filter rule to this filter set to narrow your search.
- 6. Click on this button when you want to add a new filter set. Example: You use a filter set when searching for two different type of records and need to add a separate search.
- 7. Cancel filter option.
- 8. To start the search/filter process click on the "Ok" button.

#### K. <u>Refresh Data</u>

This button allows you to refresh data when working with CardStudio Connect projects making sure all data is up to date with the connected data bases.



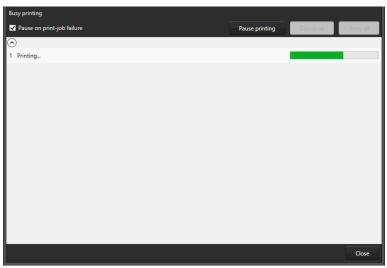
# L. <u>Print all selected records</u> Print all selected records

1. To print one or more records, select them and click the print button to print the records, using the most recent printer setup. On first-time use, the printer dialogue will be displayed.

A print window pops up, so you can select the printer you installed for the card printing process. This manual does not describe the installation of printers. Please refer to the manufacturers manuals for further information on these devices. After selecting the printer, click on the "Print" button.

🖶 Print			×
General			
- Select Printer -	P Series 9 USB Card Printe	er (Cop	
<		>	
Status: Location: Comment:	Offline	Preferences Find Printer	
Page Range	C Current Page	Number of copies: 1	
C Pages:		Collate 11 22 33	
		Print Cancel Apply	

2. A print progress window will pop-up that will show you the progress of the cards that are being printed.



Example of the Card printing progress window.

# L. CardStudio Design

This quick menu button lets you open CardStudio Design and continue with creating or adjusting your card design.



Example printer setup window.

# PrintStudio Create a Project



# **PrintStudio** Create a Project

To setup a PrintStudio project, start with the setup of a new project or open an existing one.

New Project A. Go to File in the main menu and click on "New".

Or click on the icon below in the quick menu:



File		
D	New project	А
	New Share project	
5	Open local project	
	Open Share project	
$\boxtimes$	Close project	
Ŀ	Import data	
Ŀ	Import photos	
⊡÷	Export data	
	Export photos	
ő	Print selected records	
ő	Print selected records with CX-330 U1	Ctrl+P
×	Exit	Alt+F4

Click on the "New project" link or button a "Create New Project", a selection window will pop-up. You can select one of the six options to start a new project.

🖽 Create new project	🛛 🔀
Create new project Define the structure of a new empty project.	Create project with database Print cards using data and images from external databases.
Copy existing project Copy an existing PrintStudio project.	Import from Excel or csv document Create a new project from an Excel or csv document.
Import BM7 project Convert a BadgeMaker 7 project into a PrintStudio project.	Import IDPro7 project Convert an IDPro7 project into a PrintStudio project.
	Cancel
Example of the selection window to create a new project.	

Example of the selection window to create a new project.





Click on "Create a New Project" to start with a blank data grid and setup your own database field names. A couple of default fields are supplied to speed up the setup process. Change the default fields or add extra fields as needed.

# 1. Project structure

Step 1. Setup the project structure by adding the project data fields.

Create new PrintStudio project					- 🗆 🗙
1 Project structure 2 Biometric settings 3 View configure	ation	5 TH	ggers	6 Create project	
Project structure					•
Project name: Zebra Demo Project A					
Name	Туре	Required	Unique	Default value	
ID B	Whole C *	☑ D	✓		
Is auto-incrementing				E	F
G <sub>ame</sub>	Text v				X
Last name	Text v				x
Date of birth	Date v			Select a date 15	x
Number of cards	Whole number     Y				x
Is auto-incrementing					
Card status	Options list v	✓		No card Y	X
<ul> <li>Expand to view and modify available values</li> </ul>					
					- 1
Add new property H					¥
		Previou	s step	Next step	Cancel

Example of step 1. New project: add project data columns

- A. Type in the name for your new project.
- B. Put in the database field name.
- C. Set the data type. Select if the data are number or text for example.
- D. Check these boxes if the field needs to be "Required" and or "Unique".
- E. With the default input field, you can add a standard value to your data field. Existing empty fields and new records will automatically show the default value you add to this data field.
- F. Click on the "X" button to delete a data field from the project structure setup.
- G. Enable auto-increment for "Whole number" data fields, to let for example the ID number increase by one for every new record automatically.
- H. Click on the "Add new property" button and add and describe the data field names you want to use in your new project.
- I. Click on the "Next step" button to go to step 2. and configure the detailed and gallery view.



#### 2. Biometric settings

During step 2. you can enable the biometric images you need in your project and determine how they will be stored.

💷 Create new PrintSt	udio project	- • ×
① Project structure	2) Biometric settings O Vew configuration O Card designs O Triggers O Create project	
Biometric settir	ngs	9
Enable the biometric	images you need in your project and determine how they will be stored.	×
Passport photo ✓ Enable passp Aspect ratio:	3 x 4 · ·	ŕ
Image source type:	Read image from local project	Ý
Filename column:		_
Image format:	.png E	~
Image size:	300 dpi F v 1011	рх
Images are stored in	this PrintStudio project.	
Signature ✓ Enable signatures		G
Aspect ratio:	5 x 1 ~	
Image source type:	Read image from local project	¥
Filename column:	v	
Image size:	300 dpi v 1011	рх
	an energy and the second se	-
	Previous step Next step	Cancel

Fig. Example of step 2. New project: Biometric settings

- A. The box for passport photos makes photos visible in the project and enables you to add photos.
- B. After checking the box, you can determine the ratio of the photo.
- C. Select how and where photos will be saved within your project.
- D. Check this box if you want to use data columns to represent the filename.



Example of photo's that have filenames corresponding with their ID number.

- E. Select the image format (.png, .jpg or .bmp) the photos need to be saved as within your project.
- F. Here you can select what size the photos need to be saved as within your project.
- G. The proces for signatures works the same as the photo settings.
- H. Click on the "Next step" button to go to step 3 and configure the view configuration.



### 3. View configuration

During step 3. choose the default configuration or adjust the setup for Detailed and Gallery view.

🚥 Create new PrintStudio proj	ect E	- ×
① Project structure ② Biometric	settings 3 View configuration 3 Card designs 3 Triggers 3 Create project	
View configuration		?
	e shown in the detail and gallery views. The detail view shows the currently selected record and allows you displays the passport photo's of multiple records at once.	×
Detail view Gallery view		
	First name  V Last name  V ID	~
	First name v	~
	Last name v	~
	Date of birth ×	~
	Number of cards	~
	Card status v D	~
	v	~
	· · · · · · · · · · · · · · · · · · ·	~
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~
	E	
	Previous step Car	icel

Example of step 3. New project: view configuration

- A. Tab to configure Detailed view showing specific cardholders' information.
- B. Tab to configure Gallery view showing cardholders photos.
- C. Setup the title for the detailed view.
- D. Setup the information that will be shown in the detailed view.
- E. Click on the "Next step" button to go to step 4. and add triggers to the project.

A		Ezekiel	Parsons Cu	istomer Re	lations			11002	Previous record	Next record	
		First name	Ezekiel				Street Address	P.O. Box 630, 4632 U	t St.		
5	(a)	Last name	Parsons				Postal / Zip	57633			
	3/	Company	Zebra				City	Sterling Heights			
		Department	Customer Relation	s		~	Region	Essex			
		Email	risus.Duis.a@nulla.	com			Country			v	
P		Phone	1-572-352-6849				Birthdate	11/02/1980		15	1
<del>ا</del> یتے	115-0-5	Card status	No card			¥	Number of card	s 0			
B Linoo Adam	11001 Ruth	Lino2 Ezekiel	11003 Hyatt	11004 Uta	11005 Vera	11000 Althea			11009 Charde	11010 Sydnee	

Example of the A. Detailed view and the B. Gallery view



#### 4. Card designs

Step 4. allows you to add card designs to your new project.

Create new PrintStudio project	×
Project structure     Isiometric settings     Iview configuration	Card designs ③ Triggers ④ Create project
Card designs	0
Select the card designs you want to use in this project. More advan can be configured in the project settings after creating the project.	ced settings, such as encoding or automatic card design assignment, X Card designs can be created with DesignStudio.
Available card designs:	Card designs in this project:
Example Card Design 2	Zebra Demo Card 1
Example Card Design 3	C
Example Card Design 4	
Example Card Design 5	
Example Card Design 6	
Example Gift Card	
Example Library Card	
Example Loyalty Card	
Example Member Card	
Video demo card	
Zebra Demo Card 1	*
CARDY LUCKY 2 CARDY	CARDOTINGO 2 CARDOTINGO 2 CARDOTINGO 2 Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Freme Fr
	Previous step Next step Cancel

- A. Select one of the available designs.
- B. Click on the "Add" button to add the design to your project.
- C. If you want to remove a design from your project, select one of the designs in this list.
- D. Click on the remove button if you want to delete the selected design from your project.
- E. Select a design and then click on the "Edit" button if you want to edit the bindings for the dynamic data of the card design.

Card design bindings				×
Bindings for 'Zebra Demo Ca	rd 1':			
Firstname	First name		v	^
Lastname	Last name		v	
Function			v	
Expiry	Date of birth		×	
ID number	ID		v	
				×
		Ok	Cancel	

The data binding tool is a powerful option in PrintStudio. When you add a new layout or update a layout you will be prompted to create the data bindings. Dynamic fields used and created in your layout may differ from the naming or spelling of a name that exists in your Project database. Therefore, you will be allowed to create the data bindings. The dynamic fields that are created in the layout are presented to the left and you can bind these dynamic fields to the database fields. The tool will create the bindings for you that are obvious: if they are the same or as they were bonded at the previous update; of course, you will be able to modify the bindings and confirm these settings. The new or modified layout will be available in the dashboard of PrintStudio.

F. Preview of a selected Card Design.



# 5. Triggers

Step 5. allows you to setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.

💴 Create new PrintStudio proj	ect – 🗆 🗙
Project structure     Biometric	settings. ③ View configuration ④ Card designs ⑤ Triggers ③ Create project
Triggers	0
	ically perform actions when certain events take place. For example, you can increment a counter field when x current date into a newly created record.
Events:	After printing
Before printing	These actions are performed on a record when a printer has successfully printed that record:
After printing (2) After creating a ne A After adding a passport photo	Property     D     Action     E       Number of cards     Add value     X
After adding a signature	Increment by: 1
After exporting a record	Card status Set constant value Y
After successful encoding After printing failure	Constant value: Valid card v
	B
	Previous step G p Cancel

Example of step 5. New project: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to it.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.
- G. Click on the "Next step" button to go to step 6. and create the project.

Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on Number type columns). All changes need to be saved before they become active. Understand that triggers might cause your original data to change, so make sure no vital data is lost when working with triggers.



# 6. Create project

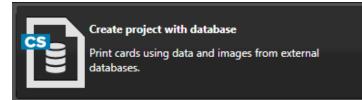
During step 6. the application will start creating your new project after you click on the A. "Create project" button. If there are problems, read the feedback provided and click on the B. "Previous" button to go back and make the needed adjustments.

You are now ready to start adding records to your data grid.

III Create new PrintStudio project	= 🗆 🗙
① Project structure         ② Biometric settings         ③ View configuration         ④ Card designs         ③ Triggers         ⑤ Create project	
Create project	0
Press the 'Create project' button to create your project.	X
	eate project
B Previous step	Cancel

Example of step 6. New project: Create project.





To create a new CardStudio project with database you need the CardStudio 2.0 Enterprise or Professional Edition. Go to the <u>CardStudio Database Connection</u> Chapter for more information.

<u>1. Data source</u>	S						
E Create PrintStudio	database project						= • ×
1 Data sources	Image sources	3 View config	guration 4 C	ard designs (	5) Triggers (6) Cri	eate project	
Data sources							?
Enter a name for your	project and specify	in which datab	ases and tables y	our data is sto	red.		×
Project name: Zebra I	Demo Project with D	atabase	А				
Add data source	B rosoft SQL S	erver				C lemove c	lata source
DEMO6400.MDB     Data	Туре:	Microsoft SC	)L Server				D
	Server:	Testserver					
	Port:	1433					
	Database name:						
	Use Windows	authentication	° E				
	Username:						
	Password:						
						F Test of	connection
Add table G						Н	
					Previous step	Next step	Cancel

Example of a New PrintStudio Database project with Microsoft SQL database connection step 1: data sources

- A. Give your PrintStudio Database project a unique name.
- B. Click on "Add data source" to add a database connection to your new project.
- C. Select an added database connection and click on "Remove data source" to remove a connection.
- D. Select the type of Database you want to connect with, give the server name, port number and database name. Several database types are supported:
  - Microsoft SQL Server
  - Microsoft Access files
  - MySQL Server
  - Oracle Server
  - ODBC
- E. When an external database is secured with credentials you can add those credentials here.
- F. Click on "Test connection" to test the connection with the external database.
- G. Select the added database connection and click on "Add table" to add a table from your database to the project.
- H. Click on "Next" to continue to the next step.



#### 2. Image sources

Step 2. Let you specify where your biometric images are located.

📟 Create PrintStud	io database project		×
① Data sources	Image sources	① View configuration         ② Card designs         ③ Triggers         ③ Create project	
Image source	s		?
Here you can speci	fy where your biometri	: images are located.	×
✓ Enable signature	s A <sub>ect ratio:</sub>	5x1 B	
✓ Enable passport	photos Aspect ratio:	3 x 4 *	
Passport photo		С	
Image source type:	Read image from loca	al project	¥
Image size:	300 dpi	D 1011	рх
Images are stored	in this PrintStudio proj	ect.	
Signature			
Image source type:	Read image from loca	al project	~
Image size:	300 dpi	× 1011	рх
Images are stored	in this PrintStudio proj		
			_
		E	
		Previous step Next step Cancel	

Example of a new project with database connection to a Microsoft SQL database step 2. Image sources.

- A. Check the box when you want to add signatures and or passport photos to your project.
- B. After checking the box, you can determine the ratio of the photo.
- C. Select the image source, from where the images need to be imported into your project.
- D. Select what size the photos need to be saved as, within your project.
- E. Click on the "Next step" button to go to step 3. and configure the detailed and gallery view.



### 3. View configuration

Step 3. Choose the default configuration or adjust the setup for Detailed and Gallery view.

Create PrintStudio database project	= ¤ ×
① Data sources ② Image sources ③ View configuration ③ Card designs ③ Triggers ④ ①	Create project
View configuration	0
Specify which properties will be shown in the detail and gallery views. The detail view shows the currently select to modify it. The gallery to be a sport photo's of multiple records at once.	ted record and allows you X
Detail view Gallery view	
A IDnumber v Firstname v Surname v	Function Y
Firstname v	Ŷ
×	Ŷ
	۷
IDnumber Firstname	¥
Surname D	*
Layout Data.Surname	
PlaceOfBirth	¥
Email Email	¥
Phonenumber	v
Logo	
CardSerialNo	
CardsIssued PhotoDate	
IssueDate	
ExpiryDate	
TAG	
	E
Previous step	Next step Cancel

Example of step 3. New project with database: View configuration

- A. Tab to configure Detailed view, showing specific card holders information.
- B. Tab to configure Gallery view, showing card holders photos.
- C. Setup the title for the detailed view.
- D. Setup the information that will be shown in the detailed view.
- E. Click on the "Next step" button to go to step 3. and add triggers to the project.

A		Ezekiel	Parsons Cu	stomer Re	lations			11002	Previous record	Next record
		First name	Ezekiel				Street Address	P.O. Box 630, 4632 U	t St.	
1	a l	Last name	Parsons				Postal / Zip	57633		
	2	Company	Zebra				City	Sterling Heights		
	3	Department	Customer Relation	s		~	Region	Essex		
A		Email	risus.Duis.a@nulla.	com			Country			~
P)		Phone	1-572-352-6849				Birthdate	11/02/1980		15
E. Pa		Card status	No card			~	Number of cards	0		
B 11000 Adam	11001 Ruth	11002 Ezekiel	11003 Hyatt	11004 Uta	11005 Vera	11006 Althea		11008 Harriet	11009 Charde	11010 Svdnee

Example of the A. Detailed view and the B. Gallery view



#### 4. Card designs

Step 4. allows you to add card designs to your new project.

Create PrintStudio database project	×
① Data sources ② Image sources ③ View configuration ④ 〇	Card designs
Card designs	0
Select the card designs you want to use in this project. More advan can be configured in the project settings after creating the project.	ced settings, such as encoding or automatic card design assignment, 🛛 🗙 Card designs can be created with DesignStudio.
Available card designs:	Card designs in this project:
Example Card Design 2	A Zebra Demo Card 1
Example Card Design 3	
Example Card Design 4	
Example Card Design 5	
Example Card Design 6	
Example Gift Card	
Example Library Card	
Example Loyalty Card	
Example Member Card	
Video demo card	
Zebra Demo Card 1	-
CARDY CORP 2 WIN WIN WIN WIN WIN WIN WIN WIN	CAROSTUGO 2
	Previous step Next step Cancel

- A. Select one of the available designs.
- B. Click on the "Add" button to add the design to your project.
- C. If you want to remove a design from your project, select one of the designs in this list.
- D. Click on the remove button if you want to delete the selected design from your project.
- E. Select a design and then click on the "Edit" button if you want to edit the bindings for the dynamic data of the card design.

Card design bindings		-		•
Bindings for 'Zebra De	mo Card 1':			
Firstname	First name		٧	P
Lastname	Last name		v	
Function			v	
Expiry	Date of birth		v	
ID number	ID		v	

The data binding tool is a powerful option in PrintStudio. When you add a new layout or update a layout you will be prompted to create the data bindings. Dynamic fields used and created in your layout may differ from the naming or spelling of a name that exists in your Project database. Therefore, you will be allowed to create the data bindings. The dynamic fields that are created in the layout are presented to the left and you can bind these dynamic fields to the database fields. The tool will create the bindings for you that are obvious: if they are the same or as they were bonded at the previous update; of course, you will be able to modify the bindings and confirm these settings. The new or modified layout will be available in the dashboard of PrintStudio.

F. Preview of a selected Card Design.



# 5. Triggers

Step 5. allows you to setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.

Create PrintStudio database	- project – 🗆 🗙
① Data sources ② Image source	a ③ View configuration ④ Card designs ⑤ Triggers ④ Create project
	cally perform actions when certain events take place. For example, you can increment a counter field when x
Events: Before printing A After printing (1) After creating a new record After adding a passport photo After adding a signature After exporting a record After successful encoding After printing failure	Affreciencing The Data at Each ed on a record when a printer has successfully printed that record: Property Action CardSerialNo Set card serial number: *     Invert card serial number (put the most significant byte first)     Store card serial number in decimal format (instead of hexadecimal)
	Previous step N G Cancel

Example of step 5. New project with database: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to it.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the Trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.
- G. Click on the "Next step" button to go to step 5. and create the project.

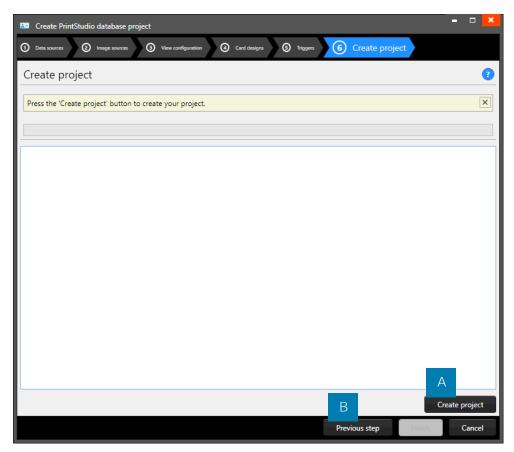
Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on Number type columns). All changes need to be saved before they become active. Please be aware that triggers might cause your original data to change, so make sure no vital data is lost when working with triggers.



## 6. Create project

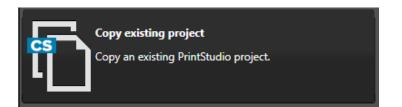
Step 6. Will create your new project after you click on the A. "Create project" button. If there are problems read the feedback provided and click on the B. "Previous" button to go back and make the needed adjustments.

You are now ready to start adding records to your data grid.



Example of step 6. New project with database: Create project.





With PrintStudio a new project can be created based on an existing project. Click on the "Copy existing project" to create a new project as a copy of another project.

Copy existing PrintStudio project	= D ×
Select project     O Capy project	
Select project	0
Here you can choose a project to copy and enter a name for the new project.	×
New project name: Example Project 2	A
Copy project structure and data     Copy project structure only	
Select which project to copy:	
Example project 1	Created at: 3/15/2018 10:06:14 AM
	D
	Previous step Next step Cancel

Example of step 1. New project: Copy existing project.

#### 1. Select project

- A. Rename the project.
- B. Select a copy with data or structure only. Select structure if you only want the data field setup and not the content of the previous project.
- C. Select an existing project from the list presented.
- D. Click on the "Next step" button to create the copy project.



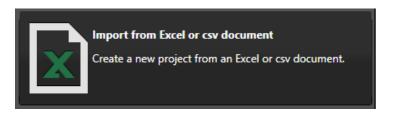
# 2. Copy project

Step 2. creates a copy of the project after you click on the A. "Create project" button. Select B. to make changes in the previous step. You are now ready to start adding records to your data grid.

Copy existing PrintStudio project	• ×
O Select project Copy project	
Copy project	?
Press the 'Create project' button to create your project. This can take some time depending on how much data and images the existing project contains.	×
A	
Create pr	
Previous step Ca	ancel

Example of step 2. New project: Copy project.





PrintStudio also offers to create new projects based on Excel files. PrintStudio will base the project structure on the Excel structure and will import all the data from the Excel file into the new project.

#### 1. Data source

Step 1. Select the Excel file and Worksheet needed for the setup of the new project. You can also add a Photo source and or Signature Source if needed.

💷 Create pr	roject from E	xcel file						- • ×
1 Excel f	ile Ø	Project structure	3 Biometric setting	s ( View configuration ( )	Card designs	6 Triggers	0 🖛	port project
Excel file								?
Select an Ex	cel or csv file	e to import o	lata from.					×
Select Excel o	or csv file:	C:\Demo\Co	rporate card data wit	h photo USA.xls				A
Select works	heet: Work	sheet	В			✓ Date for	ormat:	
Select the	e row that co	ontains the c	olumn names:					С
	В	С	D	E	F	G	н	1
וע numper	r First Name	Last Name	Department	Street Address	Postal / Zip	City	State	Country 🔺
11000	Adam	Fox	Finances	559-9424 Est Avenue	71850	Fort Smith	AR	United State
11001	Ruth	Hess	Customer Service	P.O. Box 380, 3629 Vulputate, Rd.	22886	Kapolei	HI	United State
11002	Ezekiel	Parsons	<b>Customer Relations</b>	P.O. Box 630, 4632 Ut St.	57633	Sterling Heights	MI	United State 👻
<								•
Number of re	ecords: 41							
Passport pho	oto import se	ttings:		-				
Select filenan	me column:	ID Numbe	r	E				
Select image	folder:							
Signature im	port settings	:		G				
Select filenan	me column:	ID Numbe	r					— н
Select image	folder:							
					Previous step	Nex	1	Cancel

Example of step 1. New project imported from excel file: Data source.

- A. Click on this button and select the Excel/CSV file you want to import and create a new project with.
- B. Select the worksheet you want to use from the drop-down menu.
- C. Select the date format you are using in the Excel file.
- D. Select the row that contains the column names.
- E. Select the column that connects with the unique photo names (for example: ID number or index).
- F. Select the folder that contains the cardholders' photos.
- G. Select the column that connects with the unique signature names (for example: ID number or index).
- H. Select the folder that contains the signatures.
- I. Click on the "Next step" button to continue to second step.



### 2. Project structure

Step 2. Name the new project and check the imported Excel data structure. Change, delete or add data columns here in the new project structure.

	icture				
-	efine the name of your project and what da	ta your project should conta	in.		2
Source column	Name	Туре	Required Unique	Default value	
ID Number	ID Number B	Whole number V		E	
First Name	First Name	Text v			x
Last Name	Last Name	Text v			x
Department	Department	Text v			x
Street Address	Street Address	Text v			x
Postal / Zip	Postal / Zip	Whole number *			x
City	City	Text v			x
State	State	Text v			X

Example of step 2. New project from Excel file: Project data columns

- A. Type in the name for your new project.
- B. Put in the project data column name.
- C. Set the data type. Select if the data are number or text for example. The following types of database fields are supported:
  - 1. Whole Number, when selecting this type, you can select 'auto-increment'. When a new record is created the number will be the highest number in the project increased by 1.
  - 2. Text
  - 3. Decimal number
  - 4. Option list, when this list type is selected, you can add and delete the values from the list that is presented for this database field. When you change a datatype from text to option list, PrintStudio automatically generates a list based on the data already in that data field.
- D. Check these boxes if the field needs to be "Required" and/or "Unique".
- E. With the default input field, you can add a standard value to your data field, existing empty fields and new records will automatically get the default value you add to this data field.
- F. Click on the "X" button to delete a data field from the project structure setup.
- G. Click on the "Add new property" button and add and describe the data field names you want to use in your new project.
- H. Click on the "Next step" button to go to step 2. and configure the detailed and gallery view



#### 3. Biometric settings

Step 3. Enable the biometric images needed in the new project and determine how they will be stored.

Create project from	n Excel file – 🗆 🗙
① Excel file ② Proj	ect structure 3 Biometric settings 0 Vew configuration () Card designs () Triggers () Import project
Biometric settir	ngs ?
Passport photo Finable passport ph	A
Aspect ratio:	3x4 ~
Image source type:	Read image from local project C
Filename column:	ID Number Y D
Image format:	,png E v
Image size:	300 dpi
Images are stored in	this PrintStudio project.
Signature	
Enable signatures	G
Aspect ratio:	5x1 ~
Image source type:	Read image from local project v
Filename column:	v
Image size:	300 dpi v 1011 px
Images are stored in	this PrintStudio project.
	H
	Previous step Next step Cancel

Example of step 3. New project from Excel file: Biometric settings

- A. The box for passport photos makes photos visible in the project and enables you to add photos.
- B. After checking the box, you can determine the ratio of the photo.
- C. Select how and where photos will be saved within your project.
- D. Check this box if you want to use data columns to represent the filename.



Example of photo's that have filenames corresponding with their ID number.

- E. Select the image format (.png, .jpg or .bmp) the photos need to be saved as within your project.
- F. Here you can select what size the photos need to be saved as within your project.
- G. The proces for signatures works the same as the photo settings.
- H. Click on the "Next step" button to go to step 3 and configure the view configuration.



#### 4. View configuration

Step 4. Choose the default configuration or adjust the setup for Detailed and Gallery view.

Create project from Excel fill	e	🗙
① Excel file ② Project structure	Biometric settings     View configuration	Card designs Iriggers Import project
View configuration		0
A which properties will b fy it. The gallery Detail view Gallery view	e shown in the detail and gallery views. The detail view sl lays the passport photo's of multiple records at once.	
Detail view configura	ation	0
	ID Number 👻 First Name 👻 Last Name 👻	C Department ×
	ID Number v	Country ~
	First Name v	Email
	Last Name Y	Phone v
	Department v	ID Number
	Street Address v	First Name
	Postal / Zip	Last Name Department
	City Y	Street Address Postal / Zip
	State ×	City
		State Country
		Email
		Phone Birthdate
		Previous step Next Cancel

Example of step 4. New project from Excel file: View configuration

- A. Tab to configure Detailed view, showing specific cardholders' information.
- B. Tab to configure Gallery view, showing cardholders photos.
- C. Setup the title for the detailed view.
- D. Setup the information that will be shown in the detailed view.
- E. Click on the "Next step" button to go to step 5. and add triggers to the project.

A		Ezekiel	Parsons Cu	stomer Re	lations			11002	Previous record	Next record	
		First name	Ezekiel				Street Address	P.O. Box 630, 4632 U	t St.		
	1	Last name	Parsons				Postal / Zip	57633			
	3/	Company	Zebra				City	Sterling Heights			
		Department	Customer Relation	s		~	Region	Essex			
		Email	risus.Duis.a@nulla.	com			Country				
102.00		Phone	1-572-352-6849				Birthdate	11/02/1980		15	5
- <del>T</del> a	1500	Card status	No card			~	Number of cards	0			
B 11000 Adam	11001 Ruth	11002 Ezekiel	11003	11004 Uta	11005 Vera	11006	11007 Perry	11008	11009	11010	

Example of the A. Detailed view and the B. Gallery view



#### 5. Card designs

Step 5. allows you to add card designs to your new project.

Create project from Excel file	×
① Excel file ② Project structure ③ Biometric settings	View configuration S Card designs O Triggers O Import project
Card designs	0
Select the card designs you want to use in this project. Mor can be configured in the project settings after creating the	e advanced settings, such as encoding or automatic card design assignment, x project. Card designs can be created with DesignStudio.
Available card designs:	Card designs in this project:
Example Card Design 2	Zebra Demo Card 1
Example Card Design 3	A
Example Card Design 4	
Example Card Design 5	
Example Card Design 6	
Example Gift Card	
Example Library Card	
Example Loyalty Card	
Example Member Card	
Video demo card	
Zebra Demo Card 1	<b>*</b>
CARDEN FORMULA	Remove     Remove
	Previous step Next step Cancel

- A. Select one of the available designs.
- B. Click on the "Add" button to add the design to your project.
- C. If you want to remove a design from your project, select one of the designs in this list.
- D. Click on the remove button if you want to delete the selected design from your project.
- E. Select a design and then click on the "Edit" button if you want to edit the bindings for the dynamic data of the card design.

Bindings for 'Zebra D	emo Card 1':		
Firstname	First name	v	l
Lastname	Last name	v	
Function		v	
Expiry	Date of birth	۷	
		v	1
ID number	D		
ID number	D		

The data binding tool is a powerful option in PrintStudio. When you add a new layout or update a layout you will be prompted to create the data bindings. Dynamic fields used and created in your layout may differ from the naming or spelling of a name that exists in your Project database. Therefore, you will be allowed to create the data bindings. The dynamic fields that are created in the layout are presented to the left and you can bind these dynamic fields to the database fields. The tool will create the bindings for you that are obvious: if they are the same or as they were bonded at the previous update; of course, you will be able to modify the bindings and confirm these settings. The new or modified layout will be available in the dashboard of PrintStudio.

F. Preview of a selected Card Design.



#### 6. Triggers

Step 6. Allows you to setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.

Create project from Excel file	e 🗆 🔀
Excel file     Project structure	Biometric settings     O     View configuration     O     Card designs     O     Triggers     O     Import project
	cally perform actions when certain events take place. For example, you can increment a counter field when xurrent date into a newly created record.
Events: A Before printing After printing (1) After creating a new record After adding a passport photo After adding a signature After exporting a record After successful encoding After printing failure	After printing These actions are perform ecord when a printer has successfully printed that record:  Action Set constant value v Constant value:  First Name Add trigger
	Previous step Ne Cancel

Example of step 6. New project from Excel file: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.
- G. Click on the "Next step" button to go to step 7. and create the project.

Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on Number type columns). All changes need to be saved before they become active. Please be aware that triggers might cause your original data to change, so make sure no vital data is lost when working with triggers.



#### 7. Import Project

Step 7. Creates the new project imported from an Excel file as soon as you click on the A. "Create project" button. B. Click on the "Previous step" button to make any changes before creating the project.

Import project       Project structure       Import project       Import project       Import project       Import project         Import project       Press the 'Create project' button to create your project. This can take some time depending on how much data and images need to be imported.       Import project'
Press the 'Create project' button to create your project. This can take some time depending on how much data and images need to be
A B Create project
Previous step Finish Cancel

Example of step 6. New project: import new Excel project.





### Import BM7 project

Convert a BadgeMaker 7 project into a PrintStudio project.

1. Select BadgeMaker 7 Project

PrintStudio supports creating new projects based on a former BadgeMaker 7 (Classic) project.

💷 Create project from BadgeMaker 7 project			- • ×
1 BadgeMaker 7 project 0 Project structure 1 Biometric settings 0 View	r configuration (5) Trig	gers import pro	ject
BadgeMaker 7 project			?
Select a BadgeMaker 7 project to import.			×
Select project file:			Α
Select database:			В
Number of records: 0			
		С	
	Previous step	Next step	Cancel

Example of step 1. New project from a BadgeMaker 7 project: Select BadgeMaker 7 Project

- A. Click on this button to select the BadgeMaker 7 project.
- B. Click on this button to select the BadgeMaker 7 database.
- C. Click on the "Next step" button to go to step 2. and check the project structure.



#### 2. Project structure

Step 2. Name the new project and check the imported BadgeMaker 7 structure. Change, delete or add data columns here in the new Project structure.

Here you can de	fine the name of your project and what data you	ur project should cor	ntaiı	n.			[
Project name:	DEMO6400 A						
Source column	Name	Туре		Required	Unique	Default value	
IDnumber	IDnumber B	Whole number	,	D	✓		<b>x</b>
Firstname	Firstname	Text	×				x
Surname	Surname	Text	×				x
Layout	Layout	Text	*			STUDENTCARD	x
Function	Function	Text	~				x
PlaceOfBirth	PlaceOfBirth	Text	*				x
Email	Email	Text	~				x
Phonenumber	Phonenumber	Text	~				x
Logo	Logo	Text	v				x

Example of step 2. New project from a BadgeMaker 7 project: Project data columns.

- A. Type in the name for your new project.
- B. Put in the column name
- C. Set the data type. Select if the data are number or text for example. The following types of database fields are supported:
  - 1. Whole Number, when selecting this type, you can select 'auto-increment'. When a new record is created the number will be the highest number in the Project increased by 1.
  - 2. Text
  - 3. Decimal number
  - 4. Option list, when this list type is selected, you can add and delete the list values from the list that is presented for this database field. When you change a datatype from text to option list, PrintStudio automatically generates a list based on the data already in that data field.
- D. Check these boxes if the field needs to be "Required" and/or "Unique".
- E. With the default input field, you can add a standard value to your data field, existing empty fields and new records will automatically get the default value you add to this data field.
- F. Click on the "X" button to delete a data field from the project structure setup.
- G. Click on the "Add new property" button and add and describe the data field names you want to use in your new project.
- H. Click on the "Next step" button to go to step 3.



#### 3. Biometric settings

Step 3. Enable biometric images (Passport photos and/or Signatures) for the new project and setup how these images will be stored.

3 BadgeMaker 7 project	Image: Second structure         Image: Second	
Biometric settir	igs	?
Enable the biometric	images you need in your project and determine how they will be stored.	×
Passport photo		*
✓ Enable pass A Aspect ratio: 3 x 4	os B	
Image source type:	Read image from local project	~
Filename columns	person v D	
Image format:		~
Image size:	300 dpi 1011	рх
Images are stored in	this BadgeMaker project.	- 1
Signature	F	
✓ Enable signatures		
Image source type:	Read image from local project	~
Image size:	300 dpi v 1011	рх
Images are stored in	this BadgeMaker project.	
	Previous step Nex Ca	ancel

Example of step 3. New project from BadgeMaker 7: Biometric settings

- A. The box for passport photos make photos visible in the project and enables you to add photos.
- B. Determine the ratio of the photo with the drop-down menu.
- C. Select how and where photos will be saved within your project.
- D. Check this box if you want to use data columns to represent the filename.













⊘ 11000

Example of photo's that have filenames corresponding with their ID number.

- E. Select the image format (.png, .jpg or .bmp) the photos need to be saved as within your project.
- F. Select the dpi and size of the photos that will be created and saved within your project.
- G. The checkbox for the signatures allows you to make signatures visible in the project and enables you to add passport photos. The signature section works similar as the passport photo section above. Click on the "Next step" button to go to step 3. and configure the detailed and gallery view



#### 4. View configuration

Step 4. Choose for the default configuration or adjust the setup for the Detailed and Gallery view in the new project.

1 BadgeMaker 7 project 2 Proj	ect structure () Biometric settings () View cor	nfigu	uration ③ Triggers ⑥ Import project
A configuration			2
Detail view configura	ition		
	IDnumber v Firstname v Surname v	C	Layout v
	IDnumber	~	Logo v
	Firstname	~	CardSerialNo v
	Surname	~	CardsIssued *
	Layout	~	PhotoDate D v
	Function	*	IssueDate v
	PlaceOfBirth	~	ExpiryDate v
	Email	~	TAG v
	Phonenumber	~	v
			E
			Previous step Cancel

Example of step 4. New project from BadgeMaker 7: View configuration

- A. Tab to configure Detailed view showing specific cardholders' information.
- B. Tab to configure Gallery view showing cardholders photos.
- C. Setup the title for the detailed view.
- D. Setup the information that will be available in the detailed view. Use the detailed view to have a clear overview of the card holders' data and make quick adjustments to the data.
- E. Click on the "Next step" button to go to step 5. and add triggers to the project.

A		Ezekiel	Parsons Cu	stomer Re	lations			11002	Previous record	Next record
		First name	Ezekiel				Street Address	P.O. Box 630, 4632 U	t St.	
-	-	Last name	Parsons				Postal / Zip	57633		
	21	Company	Zebra				City	Sterling Heights		
	3	Department	Customer Relation	s		~	Region	Essex		
		Email	risus.Duis.a@nulla.	com			Country			~
100		Phone	1-572-352-6849				Birthdate	11/02/1980		15
- F	115-0-0	Card status	No card			~	Number of cards	0		
B Notes that the second	11001 Ruth	Lino2 Ezekiel	11003 Hyatt	11004 Uta	11005 Vera	11006 Althea		11008 Harriet	11009 Charde	11010 Sydnee

Example of the A. detailed view and the B. gallery view



#### 5. Triggers

Step 5. Allows you to setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.

Create project from BadgeMaker	r7 project 📃 🗖 🗙
BadgeMaker 7 project     Project strue	cture ③ Biometric settings ④ View configuration ⑤ Triggers ⑥ Import project
Triggers	0
Triggers allow you to automatically a card is printed, or insert the current	perform actions when certain events take place. For example, you can increment a counter field when 🛛 nt date into a newly created record.
Events:	Before printing
Before printing (3)	These actions are performed on a record when a printer starts printing that record:
After printing	Property Actio
After creating a new record	D F Add value
After adding a passport photo (1)	
After adding a signature	Increment by: 1
After exporting a record	IssueDate Set current date Y
After successful encoding	Increment by: 0 Days v
After printing failure	ExpiryDate Set current date Y
	Increment by: 3
	В
	IDnumber Add trigger
	Previous step Vext step Cancel

Example of step 5. New project from BadgeMaker 7: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to it.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.
- G. Click on the "Next step" button to go to step 6. and create the project.

Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on Number type columns). All changes need to be saved before they become active. Understand that Triggers might cause your original data to change, so make sure no vital data is lost when working with Triggers.



#### 6. Import Project

Step 6. Creates the new project based on the BadgeMaker 7 project as soon as you click on the A. "Create project" button. B. Click on the "Previous step" button to make any changes before creating the project.

BadgeMaker 7 project     Project structure     Biometric settings     O     View configuration     Triggers     O     Import project	
Import project	?
Press the 'Create project' button to create your project. This can take some time depending on how much data and images need to be imported.	:
А	
Create project	
Previous step Cancel	

Example of step 6. New project from a BadgeMaker 7 project.



1. Select IDPro 7 Project

PrintStudio supports creating new projects based on a former IDPro 7 project.

1 IDPro7 project 0 P	Project structure () Biometric settings () View configuration () Triggers ()	Import project		
IDPro7 project			(	?
Select an IDPro 7 project to imp	vort.		;	×
Select IDPro7 configuration file:	C:\IDPro7SC\IDPro7DB.config		А	
Select IDPro7 project:	STUDENT		¥	-
Select data table:	STUDENT		~	
Number of records: 5		С		
	Previous step	Next step	Cancel	

Example of step 1. New project: Select IDPro 7 Project

- A. Click on this button to select the IDPro 7 configuration file from your computer.
- B. Click on the dropdown menu to select the IDPro 7 project and the table you would like to use to setup the new project.
- C. Click on the "Next step" button to go to step 2. and check or adjust the project structure.



#### 2. Project structure

Step 2. Name the new project and check the imported IDPro 7 structure. Change, delete or add data columns here in the new project structure.

Here you can de	fine the name of your project and what data y	our project should conta	iin.		
Project name: S					
Source column	Name	Туре	Required	Unique	Default value
Student Number	Student N B	Whole C		<b>~</b>	0X
	Is auto		D		E F
Student Type	Student Type	Options list v			Full Time Y X
	Expand to view and modify available value	Jes			
Firstname	Firstname	Text v			X
Lastname	Lastname	Text v			x
Date Of Birth	Date Of Birth	Date v			Select a date 15
Card No.	Card No.	Whole number ~	<b>v</b>	~	0 X
	Is auto-incrementing				
Expiry Date	Expiry Date	Date ~			Select a date 15 X

Example of step 2. New project from an IDPro 7 project: Project data columns.

- A. Type in the name for your new project.
- B. Put in the column name
- C. Set the data type. Select if the data are number or text for example. The following types of database fields are supported:
  - 1. Whole Number, when selecting this type, you can select 'auto-increment'. When a new record is created the number will be the highest number in the project increased by 1.
  - 2. Text
  - 3. Decimal number
  - 4. Option list, when this list type is selected, you can add and delete the list values from the list that is presented for this database field. When you change a datatype from text to option list, PrintStudio automatically generates a list based on the data already in that data field.
- D. Check these boxes if the field needs to be "Required" and/or "Unique".
- E. With the default input field, you can add a standard value to your data field, existing empty fields and new records will automatically get the default value you add to this data field.
- F. Click on the "X" button to delete a data field from the project structure setup.
- G. Click on the "Add new property" button and add and describe the data field names you want to use in your new project.
- H. Click on the "Next step" button to go to step 3.



#### 3. Biometric settings

Step 3. Enable biometric images (Passport photos and/or Signatures) for the new project and setup how these images will be stored.

1 IDPro7 project	Project structure 3 Biometric settings 3 View configuration 3 Triggers 3 Import project	
Biometric settir	ngs	0
Enable the biometric	images you need in your project and determine how they will be stored.	×
Passport photo ✓ Enable pass A Aspect ratio: 3 x 4	tos	*
Image source type:	Read image from local project	~
Image format:	Png	×
Image size:	300 dpi v 1011 this BadgeMak t.	px
Signature		
<ul> <li>Enable signatures</li> <li>Image source type:</li> </ul>	Read image from local project G	~
Filename column:	person v         v           300 dpi         v	рх
Images are stored in	this BadgeMaker project.	
	Previous step H	Cancel

Example of step 3. New project from IDPro 7: Biometric settings

- A. The checkbox for passport photos allows you to make photos visible in the project and enable to add photos.
- B. After checking the box, determine the ratio of the photo in the drop-down menu.
- C. Select how and where photos will be saved that are used in the project.
- D. Check this box to use data columns to represent the filename of the photo (for example a person's ID number).













⊘ 11006

Example of photo's that have filenames corresponding with their ID number.

- E. Select the image format (png, jpg or bmp) that the image needs to be saved as.
- F. Here you can select what size the photos need to be saved as within your project.
- G. The checkbox for the signature allow you to make signatures visible in the project and enable to add signatures. The signature section works the same as the Passport photo section above.
- H. Click on the "Next step" button to go to step 4. and configure the detailed and gallery view.



#### 4. View configuration

Step 4. Choose the default configuration or adjust the setup for the Detailed and Gallery view in the new project.

1 IDPro7 project 2 Project stru	cture ③ Biometric settings ④ View configuration	ON Triggers () Import project						
View configuration		9						
A which properties will be shown in the detail and gallery views. The detail view shows the currently selected record and allows you if y it. The gallery view plays the passport photo's of multiple records at once.								
Detail view configura	ation							
	Student Number × Student Type × Firstname	C Lastname ×						
	Student Number ×	Issue Date ×						
	Student Type v	No Issued.						
	Firstname v	MOD11 v						
	Lastname ×	CARDISSUE ~						
	Date Of Birth ×	ENCODE ~						
	Card No. ×	ESN ×						
	Expiry Date v	FIRSTINITIAL ~						
	Issue Number v	AUDIT ~						
		E						
		Previous step Next step Cancel						

Example of step 4. New project from IDPro 7: View configuration

- A. Tab to configure Detailed view showing specific card holders information.
- B. Tab to configure Gallery view showing card holders photos.
- C. Setup the title for the detailed view.
- D. Setup the information that will be available in the detailed view. Use the detailed view to have a clear overview of the card holders' data and make quick adjustments to the data.
- E. Click on the "Next step" button to go to step 5. and add triggers to the project.

А		Ezekiel I	Parsons Cu	stomer Re	lations			11002	Previous record	Next recor	ď
		First name	Ezekiel				Street Address	P.O. Box 630, 4632 U	t St.		
0	-	Last name	Parsons				Postal / Zip	57633			
	3/	Company	Zebra	a				Sterling Heights			
		Department	Customer Relation	s		~	Region	Essex			
1		Email	risus.Duis.a@nulla.	com			Country				~
		Phone	1-572-352-6849				Birthdate	11/02/1980			15
<del>ا</del> یتے		Card status	No card			~	Number of cards	0			
B											[
11000 Adam	11001 Ruth	11002 Ezekiel	11003 Hyatt	11004 Uta	11005 Vera	11006 Althea		11008 Harriet	11009 Charde	11010 Sydnee	1

Example of the A. Detailed view and the B. Gallery view



#### 5. Triggers

Step 5. Allows you to setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.

C Create project from IDPro7 project	= ¤ ×
(1) IDPro7 project (2) Project structure (3) Biometric settings (3) View configuration (5) Triggers (3) Import project	
Triggers	?
Triggers allow you to automatically perform actions when certain events take place. For example, you can increment a counter field a card is printed, or insert the current date into a newly created record.	d when X
Events:       After printing         Before printing       A         After printing (2)       These actions are performed on a record when a printer has successfully printed that record:         After reating a new record       Property       Action         After adding a passport photo       Is       D         After exporting a record       Increment by: 0       Day         No Issued.       Add value          After printing failure       Increment by: 1       Increment by: 1	F ys v X
	C Add trigger
Previous step	Cancel

Example of step 5. New project from IDPro 7: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to it.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.
- G. Click on the "Next step" button to go to step 6. and create the project.

Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on Number type columns). All changes need to be saved before they become active. Please be aware that triggers might cause your original data to change, so make sure no vital data is lost when working with triggers.



#### 6. Import Project

Step 6. Creates the new project based on the IDPro 7 project as soon as you click on the A. "Create project" button. B. Click on the "Previous step" button to make any changes before creating the project.

Create project from IDPro7 project	
③ IDPro7 project       ③ Project structure       ④ Biometric settings       ④ View configuration       ④ Triggers       ⑥ Import project	
Import project	?
Press the 'Create project' button to create your project. This can take some time depending on how much data and images need to be imported.	×
A	
Create p	roject
	ancel

Example of step 6. New project: import IDPro 7 project.

# PrintStudio Open Project



## **PrintStudio** Open Project

To open an existing Project select the "Open" link or button. All available existing projects are displayed, select the project that needs to be opened.

😐 Open project			= = ×
Corporate card data with photo USA		Created at: 5/9/	2018 10:06:40 AM
Example project 1	А	Created at: 3/15/	2018 10:06:14 AM
		Open project	B Cancel

Example of the Open existing project popup window.

- A. Select one of the existing projects
- B. Click on the "Open project" button.



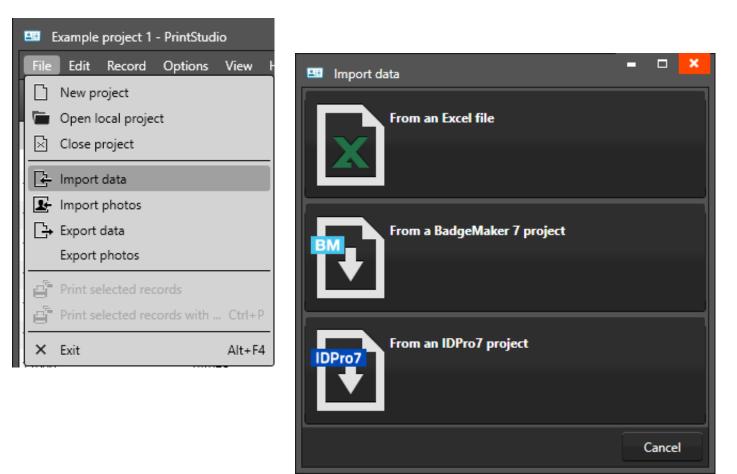
# PrintStudio Import Data



## **PrintStudio** Import Data

Import data into a PrintStudio project if more data from for example, a former project or an output from an HR-system is needed. PrintStudio offers the import of data from an Excel/CSV file, BadgeMaker 7 project or an IDPro 7 project.

Go to the Main Menu and click on "File", select "Import data":

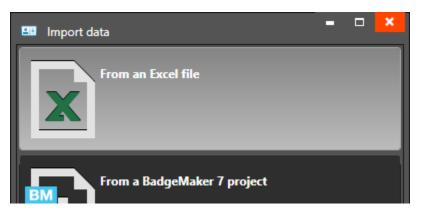


Example of the import data popup window.



#### Import an Excel file or CSV data file

To import data into the PrintStudio Project from an Excel file click on the first button "From an Excel file".



1. Data source

Step 1. Select the Excel file and Worksheet needed for the import of the data. A Photo source and/or Signature Source can be added if needed.

📟 Import da	ata from an E	xcel file						= • ×	
1 Excel fi	ile 0	Configuration	3 Import data						
Excel file								?	
Select an Ex	Select an Excel or csv file to import data and images from.								
Select Excel o	or csv file:	:\Users\Mar	ariet\OneDrive - Scre	eenCheck bv\Marketing Laptops\7	Test Data\Co	orporate card dat	a with	photo U	
Select worksh	neet: Work	<sub>ishee</sub> B				<ul> <li>Date for</li> </ul>	ormat:	d	
Select the	row that co	ntains the c	olumn names:					С	
A	В	с	D	E	F	G	н	1	
IC D	First Name	Last Name	Department	Street Address	Postal / Zip	City	State	Country 🔺	
11000	Adam	Fox	Finances	559-9424 Est Avenue	71850	Fort Smith	AR	United State	
11001	Ruth	Hess	Customer Service	P.O. Box 380, 3629 Vulputate, Rd.	22886	Kapolei	н	United State	
11002	Ezekiel	Parsons	Customer Relations	P.O. Box 630, 4632 Ut St.	57633	Sterling Heights	MI	United State 👻	
<									
Number of re	cords: 41								
Passport pho	to import ce	ttinge							
		tungs.							
Select filenan	ne column:							F	
Select image	folder								
Select Image	Tolder:								
Signature imp	port settings	:							
Select filenan	ne column:			G					
								— н	
Select image	folder:								
					Previous step	Next s	tep	Cancel	

Example of the import data popup window.

- A. Click on this button and select the Excel/CSV file you want to import and select the worksheet you want to use from the drop-down menu below.
- B. Select the row that contains the column names.
- C. Select the column that connects with the unique photo names (for example: ID number or index)
- D. Select the folder that contains the card holders' photos
- E. Select the column that connects with the unique signature names (for example: ID number or index)
- F. Select the folder that contains the signature images
- G. Click on the "Next step" button to continue to second step.



#### 2. Configuration

Step 2. Configure how the data will be imported into the project and handles the existing data.

💷 Import data from an Excel file					•	• 🗆 🗙
1 Excel file 2 Configurat	tion ③ Import data					
Configuration						?
						×
Configure which data column sh	ould be imported into w	hich record prop	erty, and how the data sh	ould be convert	ed.	
Choose how to import new recor	ds:	Insert new reco	rds and update existing r	ecords	A	¥
When encountering a conversion	error:	Use the column	ns default value instead		B	~
Select which record property unic	uely identifies records:	ID number (W	/hole number)			С
Source column		Destinatio	on Type	Restrictions	Default value	
ID Number (Whole number)	* D	→ ID numbe	r Whole number	Auto-increme Unique	nt	<u>^</u>
First Name (Text)	~		e Text			- 11
Last Name (Text)	~		e Text			- 11
	Y		Text			- 11
Department (Text)	v	> Departme	ent Options list			- 11
Street Address (Text)	~	> Street Add	dress Text			- 11
Postal / Zip (Whole number)	~		ip Text			
City (Text)	v	> City	Text			
	~	> Region	Text			
Country (Text)	v		Options list			
Г					E	×
			Previo	us step	Next step	Cancel

Example of the import Excel/CVS data popup window.

- A. Choose how imported data/new records will be handled. The drop-down menu gives you three options
- B. Select what happens when encountering a conversion error.
- C. Select one of the fields of the excel data which uniquely identifies data in the data source.
- D. Connect the source columns with the destination columns, PrintStudio will connect the columns with similar names automatically.
- E. Click on the "Next step" button to continue to import the data.



Import data from an Excel file	
O Excet file O Configuration I Import data	
Import data	?
Press the 'Import data' button to start importing data. This can take some time depending on how much data and images need to be imported.	×
	-
A	▼ t data
B Previous step Firush C	Cancel

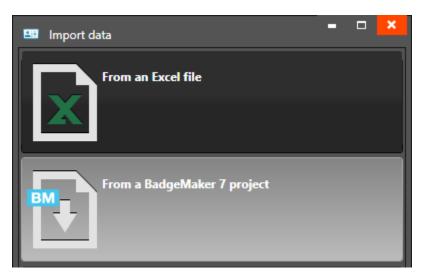
Example of step 3. Import data

Step 3. is processing the import of the Data. A. Click on the "Import data" button to start importing the data from your Excel file. B. Click on the "Previous step" button to make any changes before creating the project.



#### Import BadgeMaker 7 project data

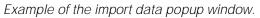
To import data into the project from a BadgeMaker 7 project click on the first button "From a BadgeMaker 7 project".



#### 1. Data source

Step 1. Select the BadgeMaker 7 project file and database needed for the import of the data.

Import data from a BadgeMaker 7 project	= 🗆 ×
BadgeMaker 7 project     O Configuration     O Import data	
BadgeMaker 7 project	?
Select a BadgeMaker 7 project to import data and images from.	×
Select project file:	Α
Select database:	B
Number of records: 0	
С	
Previous step Next step	Cancel



- A. Click on this button to select the BadgeMaker 7 project from your computer.
- B. Click on this button to select the BadgeMaker 7 database from your computer.
- C. Click on the "Next step" button to go to step 2.



#### 2. Configuration

<sup>(a)</sup> Begedddard 2 propert <sup>(a)</sup> Configuration <sup>(a)</sup> Configuration <sup>(a)</sup> Configuration <sup>(a)</sup> Configure which data column should be imported into which record property, and how the data should be converted <sup>(a)</sup> (a)             Configure which data column should be imported into which record property, and how the data should be converted <sup>(a)</sup> (a)             Configure which data column should be imported into which record property, and how the data should be converted <sup>(a)</sup> (a)             Configure which data column should be imported into which record property, and how the data should be converted           (a)             Configure which data column should be imported into which record property, and how the data should be converted           (a)             Configure which floats           Insert new records and update existing records           (a)             Vhole number()           Use the columns default value instead           B           B             Donumber (Whole number)           D)           D)           Department         Options list             Surrame (Text)           Department         Options list           Department         Options list	Import data from a BadgeMaker 7 project			-	• • ×
Configuration       ?         Configure which data column should be imported into which record property, and how the data should be consisted.       Image: Consistence of the column should be imported into which record property, and how the data should be consistence of the columns default value instead       Image: Consistence of the column should be imported into which record property uniquely identifies records         When encountering a conversion error:       Image: Constant on the columns default value instead       Image: Constant on the columns default value instead       Image: Constant on the column should be constant on the column should be constant on the column should be constant on the columns default value instead         Select which record property uniquely identifies records:       ID number (Whole number)       Constant on the column should be instead       Image: Constant on the column should be constant on the constant on the col	BadgeMaker 7 project     Configuration	mport data			
Configure which data column should be imported into which record property, and how the data should be comment       A         Choose how to import new records:       Insert new records and update existing records       B       C         When encountering a conversion error:       Use the columns default value instead       B       C         Select which record property uniquely identifies records:       D number (Whole number)       C         Source column       Destination       Type       Restrictions       Default value         IDnumber (Whole number)       ID number       Whole number       Auto-increment Unique       C         Firstname (Text)       Ist name       Text       Ist name       Text         IDnumber (Whole number)       Company       Text       Ist name       Text         Unumber (Whole number)       Company       Text       Ist name       Text         Usynt (Text)       Department       Options list       Ist name       Text         Usynt (Text)       Postal / Zip       Text       Ist name       Text         Usynt (Text)       City       Text       City       Text         Cardissue (Whole number)       City       Text       E       Ist name         Photeol/Bith (Text)       Region       Text       E					
Choose how to import new records:  Insert new records and update existing records  When encountering a conversion error: Use the columns default value instead  B  C  C  Select which record property uniquely identifies records: D number (Whole number)  C  Source column  D  D  D  D  D  D  D  D  D  D  D  D  D	Configuration				?
Choose how to import new records:  Insert new records and update existing records  When encountering a conversion error: Use the columns default value instead  B  C  C  Select which record property uniquely identifies records: D number (Whole number)  C  Source column  D  D  D  D  D  D  D  D  D  D  D  D  D					
Choose how to import new records:       Insert new records and update existing records         When encountering a conversion error:       Use the columns default value instead         Select which record property uniquely identifies records:       ID number (Whole number)         C       C         Source column       Destination       Type       Restrictions       Default value         IDnumber (Whole number)       ID number       Whole number       C         IDnumber (Whole number)       ID number       Whole number       Auto-increment Unique         Firstname (Text)       ID number       First name       Text         IDnumber (Whole number)       C company       Text       Text         IDnumber (Text)       Department       Options list       First name       Text         Surname (Text)       Department       Options list       First name       Text         PlaceOfBirth (Text)       Email (Text)       Postal / Zip       Text       First name       Text         PlaceOfBirth (Text)       Email (Text)       Region       Text       Email (Text)       Email (Text)         Phonenumber)       C country       Options list       Email (Text)       Email (Text)       Email (Text)         PhotoDate (Date)       C country       Option	Configure which data column should be imported into w	which record property, ar	nd how the data sh	ould be converted	×
Choose how to import new records:       Insert new records and update existing records         When encountering a conversion error:       Use the columns default value instead         Select which record property uniquely identifies records:       ID number (Whole number)         C       C         Source column       Destination       Type       Restrictions       Default value         IDnumber (Whole number)       ID number       Whole number       C         IDnumber (Whole number)       ID number       Whole number       Auto-increment Unique         Firstname (Text)       ID number       First name       Text         IDnumber (Whole number)       C company       Text       Text         IDnumber (Text)       Department       Options list       First name       Text         Surname (Text)       Department       Options list       First name       Text         PlaceOfBirth (Text)       Email (Text)       Postal / Zip       Text       First name       Text         PlaceOfBirth (Text)       Email (Text)       Region       Text       Email (Text)       Email (Text)         Phonenumber)       C country       Options list       Email (Text)       Email (Text)       Email (Text)         PhotoDate (Date)       C country       Option				Α	
When encountering a conversion error:       Use the columns default value instead         Select which record property uniquely identifies records:       ID number (Whole number)       C         Source column       Destination       Type       Restrictions       Default value         ID number (Whole number)       D       ID number       Whole number       Auto-increment Unique         Firstname (Text)       ID number       First name       Text         ID number (Whole number)       C company       Text         Surname (Text)       C company       Text         Surname (Text)       Department       Options list         Function (Text)       Postal / Zip       Text         Phonenumber (Text)       City       Text         CardSerialNo (Text)       Region       Text         Surdate (Date)       C country       Options list	Choose how to import new records:	Insert new records and	d update existing re		¥
Select which record property uniquely identifies records: Dumber (Whole number) Destination Destination Type Restrictions Default value Auto-increment Unique Auto-increment Unique Firstname (Text) Firstname (Text) Firstname (Text) Surrame (Text) Function (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) Email (Text) PlaceOfBirth (Text) CardSisued (Whole number) PhotoDate (Date) Surrame (Date) Surrame (Text) PhotoDate (Date) Surrame (Date)				B	
Source column     Destination     Type     Restrictions     Default value       IDnumber (Whole number)     D     ID number     Whole number     Auto-increment Unique       Firstname (Text)     First name     Text       IDnumber (Whole number)     Ext     Company     Text       Firstname (Text)     Company     Text       Surname (Text)     Department     Options list       Function (Text)     Postal / Zip     Text       Phonenumber (Text)     City     Text       Lago (Text)     City     Text       PhotoDate (Date)     Country     Options list	When encountering a conversion error:	Use the columns defa	ult value instead		Ý
IDnumber (Whole number)       D       ID number       Whole number       Auto-increment Unique         Firstname (Text) <ul> <li>Firstname (Text)</li> <li>Last name</li> <li>Last name</li> <li>Text</li> <li>Surname (Text)</li> <li>Surname (Text)</li> <li>Company</li> <li>Text</li> <li>Surname (Text)</li> <li>Department</li> <li>Options list</li> <li>Function (Text)</li> <li>PlaceOfBirth (Text)</li> <li>Email (Text)</li> <li>Postal / Zip</li> <li>Text</li> <li>Postal / Zip</li> <li>Text</li> <li>Cardsisued (Whole number)</li> <li>PhotoDate (Date)</li> <li>Surdate (Date)</li></ul>	Select which record property uniquely identifies records:	ID number (Whole n	umber)		С
IDnumber (Whole number)       D       ID number       Whole number       Auto-increment Unique         Firstname (Text) <ul> <li>Firstname (Text)</li> <li>Last name</li> <li>Last name</li> <li>Text</li> <li>Surname (Text)</li> <li>Surname (Text)</li> <li>Company</li> <li>Text</li> <li>Surname (Text)</li> <li>Department</li> <li>Options list</li> <li>Function (Text)</li> <li>PlaceOfBirth (Text)</li> <li>Email (Text)</li> <li>Postal / Zip</li> <li>Text</li> <li>Postal / Zip</li> <li>Text</li> <li>Cardsisued (Whole number)</li> <li>PhotoDate (Date)</li> <li>Surdate (Date)</li></ul>		L			
IDnumber (Whole number)       ID number       Whole number       Unique         Firstname (Text)       ID number       First name       Text         IDnumber (Whole number)       First name       Text         Firstname (Text)       Company       Text         Surname (Text)       Department       Options list         Function (Text)       Department       Options list         PlaceOfBirth (Text)       Street Address       Text         Phonenumber (Text)       Otions Ist       City         CardSerialNo (Text)       Region       Text         CardStsued (Whole number)       PhotoDate (Date)       Country       Options list	Source column	Destination	Туре	Restrictions Default value	
IDnumber (Vkole number)     Last name     Text       IFristname (Text)     Company     Text       Layout (Text)     Department     Options list       Function (Text)     Street Address     Text       PlaceOfBirth (Text)     Postal / Zip     Text       Phonenumber (Text)     City     Text       CardSerialNo (Text)     Region     Text       CardSerialNo (Text)     Country     Options list	IDnumber (Whole number) V	→ ID number	Whole number		*
IDnumber (Whole number)       Company       Text         Firstname (Text)       Department       Options list         Layout (Text)       Street Address       Text         PlaceOfBirth (Text)       Street Address       Text         Phonenumber (Text)       Postal / Zip       Text         Logo (Text)       City       Text         CardSerialNo (Text)       Region       Text         CardSlowed (Whole number)       PhotoDate (Date)       Country       Options list         IssueDate (Date)       E       E       E	Firstname (Text)	> First name	Text		
Firstname (Text)       Company       Text         Surname (Text)       Department       Options list         Layout (Text)       Street Address       Text         PlaceOfBirth (Text)       Postal / Zip       Text         Phonenumber (Text)       City       Text         CardSerialNo (Text)       Region       Text         CardStsued (Whole number)       Country       Options list         PhotoDate (Date)       E       E	IDnumber (Whole number)	→ Last name	Text		
Surname (Text)       Department       Options list         Layout (Text)       Department       Options list         Function (Text)       Street Address       Text         PlaceOfBirth (Text)       Postal / Zip       Text         Logo (Text)       City       Text         CardSsized (Whole number)       PhotoDate (Date)       Scountry       Options list         IssueDate (Date)       Email (Text)       Email (Text)       Email (Text)			Text		
Layour (rext)     Function (Text)       Function (Text)     Street Address       PlaceOfBirth (Text)     Postal / Zip       Email (Text)     Other Postal / Zip       Phonenumber (Text)     City       Logo (Text)     City       CardSerialNo (Text)     Region       CardSlosued (Whole number)     Country       Options list     E					
PlaceOfBirth (Text)     Street Address     Text       Email (Text)     Postal / Zip     Text       Phonenumber (Text)     City     Text       CardSerialNo (Text)     Region     Text       CardSlssued (Whole number)     PhotoDate (Date)     Country     Options list	Layout (Text)	→ Department	Options list		
Email (Text) Phonenumber (Text) Logo (Text) CardSerialNo (Text) CardSlssued (Whole number) PhotoDate (Date) IssueDate (Date) E	Function (Text)		Text		
Phonenumber (Text) Logo (Text) CardSerialNo (Text) CardSlssued (Whole number) PhotoDate (Date) IssueDate (Date) E	PlaceOfBirth (Text)				
Logo (Text)     City     Text       CardSerialNo (Text)     → Region     Text       CardSlssued (Whole number)     → Country     Options list       PhotoDate (Date)     → Country     Options list		— Postal / Zip	Text		
Logo (Text) CardSerialNo (Text) CardsIssued (Whole number) PhotoDate (Date) IssueDate (Date) IssueDate (Date) E E E			Text		
CardsIssued (Whole number) PhotoDate (Date) IssueDate (Date) E E					
PhotoDate (Date) Country Options list E			Text		
IssueDate (Date)			Options list		
				E	Ŧ
	ExpiryDate (Date)				
TAG (Whole number) Previous step Cancel			Previou	s step Next step	Cancel

Example of the import of BadgeMaker 7 data popup window.

- A. Choose how imported data/new records will be handled. The drop-down menu gives you three options
- B. Select what happens when encountering a conversion error.
- C. Select one of the fields of the excel data which uniquely identifies data in the data source.
- D. Connect the source columns with the destination columns, PrintStudio will connect the columns with similar names automatically.
- E. Click on the "Next step" button to continue to import the data.



#### 3. Import data

Import data from a BadgeMaker 7 project				- 0	×
BadgeMaker 7 project     O     Configuration     Import data					
Import data					?
Press the 'Import data' button to start importing data. This can take some time depending imported.	ng on how	/ much data an	d images need t	o be	×
					-
				_	
			А	mport da	ta
	В	evious step	Finish	Cane	el

Example of step 3. Import data

Step 3. is processing the import of the Data. A. Click on the "Import data" button to start importing the data from your Excel file. B. Click on the "Previous step" button to make any changes before creating the project.



#### Import IDPro 7 data

To import data into the PrintStudio Project from an IDPro 7 project click on the first button "From an IDPro 7 project".



#### 1. Data source

Step 1. Select the IDPro 7 configuration file and the project needed for the import of the data.

IDPro7 project     O Configuration     O Import data  IDPro7 project Select an IDPro7 project to import data and images from. Select IDPro7 configuration file: Select IDPro7 project: Select data table: Number of records: 0	
Select an IDPro7 project to import data and images from.         Select IDPro7 configuration file:       A         Select IDPro7 project:       B         Select data table:       B	
Select IDPro7 configuration file:	?
Select IDPro7 project: Select data table: B	×
Select data table:	
Previous step	

Example of the import data popup window.

- A. Click on this button to select the IDPro 7 configuration file from your computer.
- B. Click on the dropdown menu to select the IDPro 7 project and table.
- C. Click on the "Next step" button to go to step 2.



#### 2. Configuration

BadgeMaker 7 project     Configuration	) Import data				
Configuration					?
Configure which data column should be imported int	o which record property, a	nd how the data sh	ould be converted	4.	x
Choose how to import new records:	Insert new records an	d update existing re	ecords A		Ŷ
When encountering a conversion error:	Use the columns defa	ult value instead		B	~
Select which record property uniquely identifies record	ds: ID number (Whole n	umber)			
Source column	Destination	Туре	Restrictions	Default value	С
IDnumber (Whole number) Y		Whole number	Auto-increment Unique		*
Firstname (Text)	> First name	Text			
IDnumber (Whole number)	> Last name	Text			
Firstname (Text)		Text			
Surname (Text)		Options list			
Layout (Text) Function (Text)		Text			
PlaceOfBirth (Text)		lext			
Email (Text)		Text			
Phonenumber (Text) Logo (Text)		Text			
CardSerialNo (Text)		Text			
CardsIssued (Whole number)	/ Region				
PhotoDate (Date)		Options list			
IssueDate (Date)				E	
ExpiryDate (Date)		Previou	s step N	ext step	Cancel
TAG (Whole number)					

Example of the import of IDPro 7 data popup window.

- A. Choose how imported data/new records will be handled. The drop-down menu gives you three options.
- B. Select what happens when encountering a conversion error.
- C. Select one of the fields of the excel data which uniquely identifies data in the data source.
- D. Connect the source columns with the destination columns, PrintStudio will connect the columns with similar names automatically.
- E. Click on the "Next step" button to continue to import the data.



#### 3. Import data

Import data from a BadgeMaker 7 project		- • ×
BadgeMaker 7 project     O     Configuration     Import data		
Import data		?
Press the 'Import data' button to start importing data. This can take some time dependir imported.	ng on how much data and images r	need to be X
		_
		_
		_
		A mport data
	B revious step	h Cancel

Example of step 3. Import data

Step 3. is processing the import of the Data. A. Click on the "Import data" button to start importing the data from your Excel file. B. Click on the "Previous step" button to make any changes before creating the project.



## **PrintStudio** Import Photos

At step 1. Biometric data you have the option to select the folders you would like to import from for your passport photos and or signature images.

💷 Import images		×
1 Image source	Import images	
Image source		?
	ontain your images, and the columns that contain their filenames. Please fill in the passport photo or signature eed with the image import process.	×
Passport photo import se	attings:	
Select filename column:	ID number	
Select image folder:	C:\Users\Margriet\OneDrive - ScreenCheck bv\Documents\Zebra\Example Data\Headshots\3 X 4	
Signature import settings	51	
Select filename column:	A	
Select image folder:	В	
	Previous step Next step Cance	el

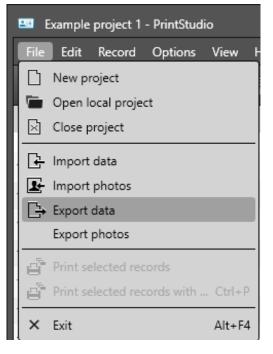
Example of importing biometric data.

- A. Select the data field that contains the unique data like the photos and or signature names.
- B. Click on this button and select the photos and or signatures folder you want to import from. The images need to have a unique name that can be connected to one of the unique fields.
- C. Click on the "Next step" button to continue to import the photos and or signatures.

## PrintStudio Export Data



## **PrintStudio** Export Data



To export data first select the records you would like to export. Select all records or make a selection of records. Go to the Main menu, **click on "File"** and select **"Export data"** in the submenu:

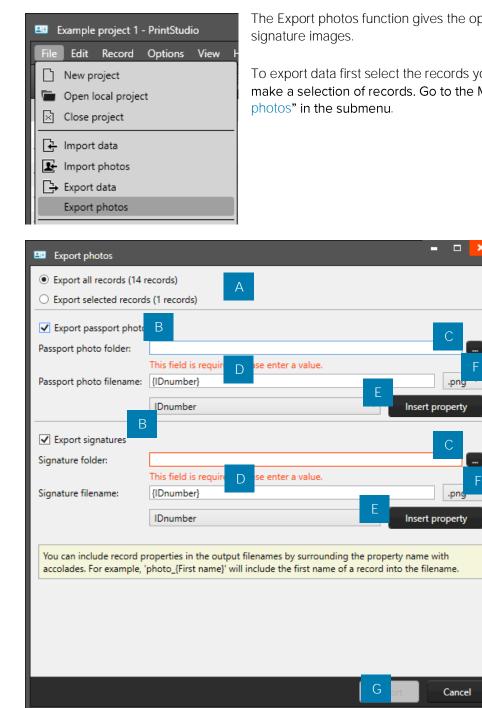
- A. Select to export all records or a selection of records.
- B. Now click on the "Export" button and a CSV file will be generated.

💴 Export data	-		×
Export all records (21 records)     A			
O Export selected records (0 records)			
B Export		Cancel	
Evample of evporting DrintStudie project data			

Example of exporting PrintStudio project data.



### **PrintStudio Export Photos**



#### Example of exporting CardStudio project images.

- A. To export data first select if you would like to export all records or a selection you made.
- B. Check the boxes to choose to export photos and/or signatures.
- C. Click on this button and select the photos and or signatures folder to export to.
- D. Give the exported images a name.
- E. You can include column properties in the output filenames by selecting a column and clicking on "insert property". For example: "{ID number}".
- F. Select the file type: jpg, png or bmp.
- G. Click on the "Next step" button to continue to export the photos and or signatures.



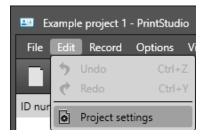
To export data first select the records you would like to export. Select all records or make a selection of records. Go to the Main menu, click on "File" and select "Export

## PrintStudio Project Settings



## **PrintStudio** Project Settings

To change the Project Settings go to the Main Menu, click on "Edit" and select "Project Settings" in the sub menu. Go to Project Settings to change the setup, project structure or to add and manage Card Designs in your project. Make sure you click on the "Save" button when making changes.



#### Detail View

Configure the layout of the detail view. The detail view is the view shown in the middle of the dashboard, giving you detailed information of a record. Use the detailed view to quickly adjust record data.

Project settings				×
<ul> <li>General settings</li> <li>Detail view</li> </ul>	Detail view configura	tion		
Gallery view Biometric settings Card designs	gnment	First name v Last name v	Department \vee	ID number 👻
Card design assignment Project structure		First name	Street Addre A	~
Triggers Manage project		Last name	Postal / Zip	v
<ul> <li>Card encoding Encoding settings</li> </ul>		Company	City	~
		Department	Region	~
		Email	Country	v
		Phone	Birthdate	v
		Card status	Number of cards	v
			J	v
			Save	Cancel

Example of the Project settings: Detailed view configuration

A. Use the drop-down menus to select where you want to see certain data fields. At the top are usually the most important fields selected like the first name, last name and ID number.

А		Ezekiel	Parsons Customer Relations		11002 Previous record Next record
		First name	Ezekiel	Street Address	P.O. Box 630, 4632 Ut St.
	007	Last name	Parsons	Postal / Zip	57633
1		Company	Zebra	City	Sterling Heights
	See.	Department	Customer Relations ~	Region	Essex
T		Email	risus.Duis.a@nulla.com	Country	· · ·
12		Phone	1-572-352-6849	Birthdate	11/02/1980
	E Parson	Card status	No card *	Number of cards	0

Example of the A. Detailed view in the PrintStudio Dashboard.



#### Gallery view

The Gallery View is the Photo slide presentation. Gallery view lets you find a persons record very easy when people are showing up at the front desk to change or replace a card. In the Gallery setting you can select 2 (two) database fields that are presented with the Photo. You can select First name and Last name or choose for the record ID or any other database field.

Project settings	
<ul> <li>General settings         <ul> <li>Detail view</li> <li>Gallery view</li> <li>Biometric settings</li> <li>Card designs</li> <li>Card design assignment</li> <li>Project structure</li> <li>Triggers</li> <li>Manage project</li> </ul> </li> <li>Card encoding</li> <li>Encoding settings</li> </ul>	Gallery view configuration
	Save Cancel

Example of the Preview Project settings: Gallery view

A. In the Gallery setting you can select 2 (two) database fields that are presented with the Photo. You can select First name and Last name or chose for the record ID or any other database field.



Example of the A. Gallery view in the PrintStudio Dashboard.



# **Biometric settings**

The Biometric settings is for managing the Passport Photos and/or Signatures in the project. Add Photo's and Signatures or adjust the settings for the photos or signatures.

Project settings		×
▲ General settings Detail view	Biometric settings	
Gallery view Biometric settings Card designs Card design assignment Project structure Triggers Manage project Card encoding Encoding settings	Passport pho A Enable passes notos Aspect ratio: 3 x 4 Image source type: Read image from local project   Filename column: D	*
	Image size: Unlimited E Images are stored in this PrintStudio project.	
	Signature F	l
	Aspect ratio: 5 x 1 ~	
	Image source type: Read image from local project v	]
	Filename column:	
	Image size: Vnlimited Y	
	Images are stored in this PrintStudio project.	~
	G Save Cance	el

Example of the Project settings: Biometric settings

- A. The checkbox for passport photos allows you to make photos visible in the project and enables you to add photos.
- B. Determine the ratio of the photo with the drop-down menu.
- C. Select how and where photos will be saved within your project.
- D. Check this box if you want to use data columns to represent the filename.



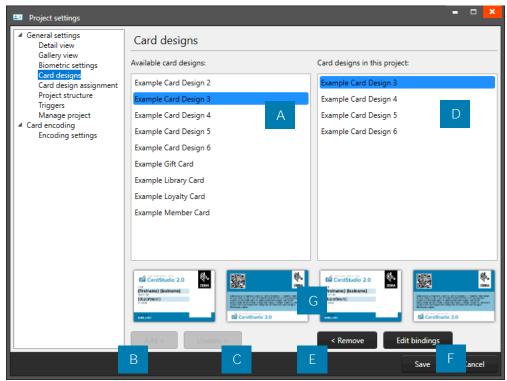
Example of photo's that have filenames corresponding with their ID number.

- E. Select with what dpi and size the photos need to be saved within your project.
- F. The checkbox for the signature allows you to make signatures visible in the project and enable you to add signatures. The signature section works the same as the passport photo section above.
- G. Click on the "Next step" button to go to step 3. and configure the detailed and gallery view.



# Card Designs

Add and manage Card Designs in your project.



Example of the Project settings: Card Designs

- A. Select one of the available designs.
- B. Click on the "Add" button to add the design to your project. If the Design has Dynamic data, bind this data to the correct data fields in your project.
- C. If you already have a card design in the project, but changed the design, choose to update it by clicking on the "Update" button. Any change made to an existing design in the project will be updated after clicking on this button.
- D. If you want to remove a design from your project, select one of the designs in this list, then click on E.
- E. Click on the remove button if you want to delete one of the selected designs from your project.
- F. Select a design and click on "Edit bindings" when you want to edit the bindings for the dynamic data of the card

Card design bindings	×					
Bindings for 'Example Card Design 3':						
valid_date	Expiration date v					
department	Department ~					
firstname	First name ~					
lastname	Last name *					
Encoding settings:						
Select CCI: v						
	Ok Cancel					

design.

1. The data binding tool is a powerful option in PrintStudio.

When you add a new layout or update a layout you will be prompted to create the data bindings. Dynamic fields used and created in your layout may differ from the naming or spelling of a name that exists in your Project database. Therefore, you will be allowed to create the data bindings.

The dynamic fields that are created in the layout are presented to the left and you can bind these dynamic fields to the database fields. The tool will create the bindings for you that are obvious: if they are the same or as they were bonded at the previous update; of course, you will be able to modify the bindings and confirm these settings. The new or modified layout will be available in the dashboard of CardStudio Identity.

G. Preview of a selected Card Design.



# Card designs assignment

It is possible to assign the card designs using a specific project column.

General settings Detail view Card design assignment	
Gallery view Biometric settings Card designs Card design assignment	any ~
Project structure Healthcare Center	Example Caro Design 4 V
Triggers Manage project Zebra B	Example Card Design 3
Card encoding     Encoding settings     ODS Bank	Example Card Design 5
University	Example Card Design 6 *
Default card design: Example Card Design 3	Add new mapping value
	E Save Cancel

Example of the Project settings: Card design assignment

- A. Click on the drop-down menu to select the column. In the example we select the Company column. There is a different card design for every Company in the project.
- B. Enter the value that needs to be linked to a specific card design. In the example company names are entered.
- C. Select one of the available card designs from the drop-down menu and link the design to the value entered in the input field (B).
- D. Select one of the card designs from the drop-down menu as the default design for all the data not corresponding with the values entered above.
- E. Enter another value to add to the mapping and click the "Add new mapping value". For example if you would like to add another company with a new company design.



# Project structure

The project structure settings is for managing your structure. You can create, edit or delete data columns in your project.

Project settings						= 🗆 🗙
<ul> <li>General settings</li> <li>Detail view</li> </ul>	Project structure					
Gallery view Biometric settings Card designs	Name	Туре	Required	Unique	Default value	
Card design assignment Project structure	ID number	Whole B r ~	✓	✓		x
Triggers Manage project	✓ Is auto-incr A		С		D	E
<ul> <li>Card encoding Encoding settings</li> </ul>	First name	Text ~				x
	Last name	Text ~				x
	Company	Text ~				x
	Department	Options list			Ŷ	x
	Expand to view and m	odify available values				
	Street Address	Text ×				x
	Postal / Zip	Text *				x
	City	Text v				x
	Region	Text v				x
	Add new property					
					Save	Cancel

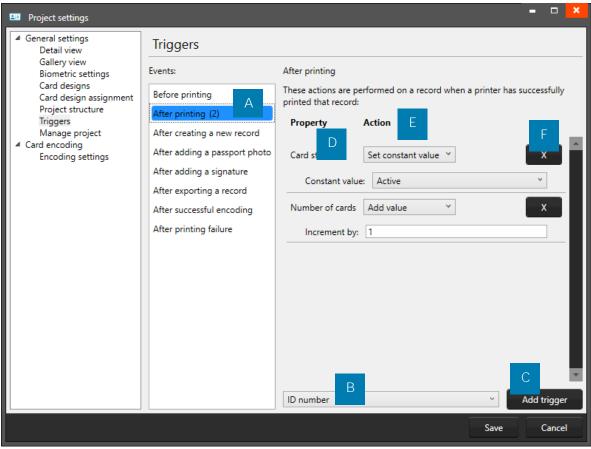
Example of the Project settings: Project structure

- A. Enter the column name.
- B. Set the data type. Select if the data are number or text for example. The following types of database fields are supported:
  - 1. Whole Number, when selecting this type, you can select 'auto-increment'. When a new record is created the number will be the highest number in the Project increased by 1.
  - 2. Text
  - 3. Decimal number
  - 4. Option list, when this list type is selected, you can add and delete the list values from the list that is presented for this database field. When you change a datatype from text to option list, PrintStudio automatically generates a list based on the data already in that data field.
- C. Check these boxes if the field needs to be "Required" and/or "Unique".
- D. With the default input field, you can add a standard value to your data field, existing empty fields and new records will automatically get the default value you add to this data field.
- E. Click on the "X" button to delete a data field from the project structure setup.
- F. Click on the "Add new property" button and add and describe the data field names you want to use in your new project.



# Triggers

Setup triggers for your project. Triggers can be used to automatically change data in your project on a certain condition or event.



Example of Project Settings: Triggers

- A. Select one of the events from this list and add specific triggers. PrintStudio will automatically wait for the event to occur before performing the action that is linked to the trigger.
- B. All data columns of the new project are listed. Select one of the columns to link a trigger action to it.
- C. Click on the "Add trigger" button to add the trigger to the data column and specify the trigger with events and actions.
- D. The property shows you the selected data column.
- E. Select the action you want to connect to the data column from the drop-down menu and define the action.
- F. Click on the "X" button to delete a trigger from an event.

Define the action that is performed once the event has been met. Some actions are only available for specific columns (for example, incrementing number values can only be done on number type columns). All changes need to be saved before they become active. Understand that triggers might cause your original data to change, so make sure no vital data is lost when working with triggers.



# Manage Project

Delete your project. You are able to completely delete the current project you are working on.

Project settings			×
<ul> <li>Project settings         <ul> <li>General settings             Detail view             Gallery view             Biometric settings             Card designs             Card design assignment             Project structure             Triggers             Manage project             Card encoding             Encoding settings</li> </ul> </li> </ul>	Manage project Permanently delete the current project:	Delete project	
	Sav	re Cancel	

Example of the Project settings: Project management

# PrintStudio Link Card Design to record



# **PrintStudio** Link Card Design to record

Link your records to your Card Design, so you can print a card.

When a data record is selected click on the "Link" button of one of the card designs in the Card Designs Gallery view to connect the design to the record. To change the connection to a different lay-out the user can click on the "Unlink" button and link another design. It is possible to select multiple data records at the same time and connect the selected records to a lay-out. Use CTRL+A, + CTRL or +SHIFT, Use CTRL+A to select all records.





# PrintStudio Records



# PrintStudio Records

Records are single data rows that contain all the information of one person. There is a button for adding and deleting a record.

### Add Records

Records are single data rows that contain all the information of one person. There is a button for adding and deleting a record manually. (To add multiple records, choose to import an excel file for example.)



### 1. Add a new record

If you add a record, a new pop-up window will appear to enter the new record data. The entry form allows the user to enter the data and Capture Photo and/or Signature.

### 1. Information

- A. Enter the needed information for each field and click on the
- B. "Next Step" button.

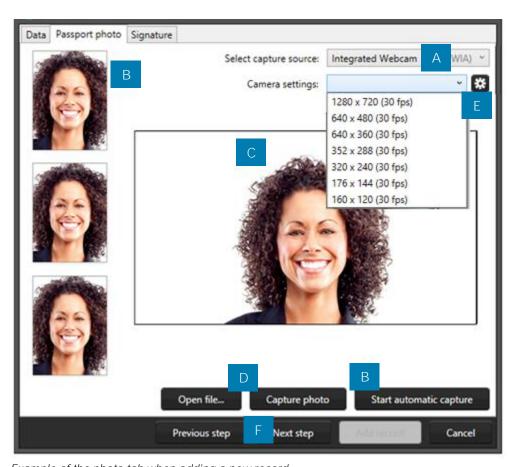
Data Passport	photo Signature		
ID number			•
	This field is required. Please enter a value.		
First name			
Last name			
Company			
Department			
Street Address			
Postal / Zip			
City			
Region			
Country			
Email			
Phone			
Birthdate			
List Name			
Expiry Date	01-01-2019	~	
	Previous step B Next step Add record Ca	incel	

Example of the information tab when adding a new record.



## 2. Photo

- A. Select the source of camera you want to use from the drop-down menu. You can choose to use your web cam or a TWAIN camera that you installed and connected to your computer.
- B. Click on the "Start automatic capture" button. The application will detect your face automatically and take three pictures. You can select one of the three pictures to add to the new record.
- C. The Photo functionality will show you the camera view.
- D. Click on the "Capture photo" button. The Photo functionality will show you the camera view. You are also able to upload an image from your computer. Click on the "Open file..." button to select an image from a file.
- E. To change the camera setting click on the drop-down to select the capture resolution and click the settings icon to adjust more settings. These settings can be different depending on the camera.
- F. "Next Step" button.

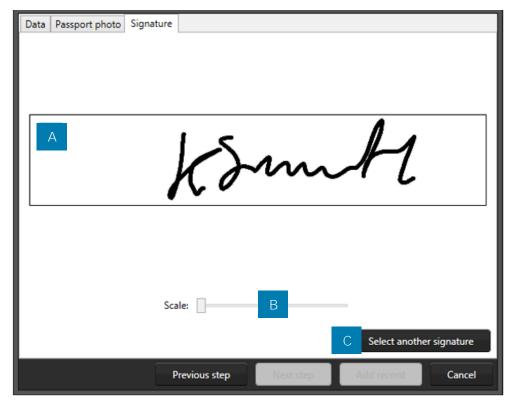


Example of the photo tab when adding a new record.

Properties		×
Video Proc Amp Camera Co	introl	
	Auto	
Brightness	128 [	
Contrast	<u>25</u> [	
Hue		
Saturation	j <u>155</u>	
Shargness	<u>6</u>	
<u>G</u> amma	<u></u> 75 $\Box$	
White Balance		
Backlight Comp		
Gain		
Color <u>E</u> nable	PowerLine Frequency (Anti Flicker) 60 Hz -	
	Default	
	OK Cancel Apply	

# 3. Signature

- A. Connect the signature pad to the PC. Use a signature pad to write a signature into this field.
- B. Scale the signature using the slider.
- C. Select a signature from file.



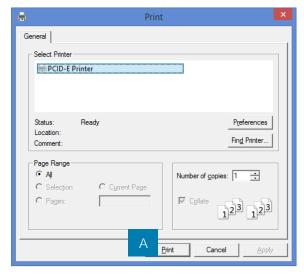
Example of the signature tab when adding a new record.

# Print records

To print a certain record, select it and then click on the print button in the quick menu or go to File and click on the print link.

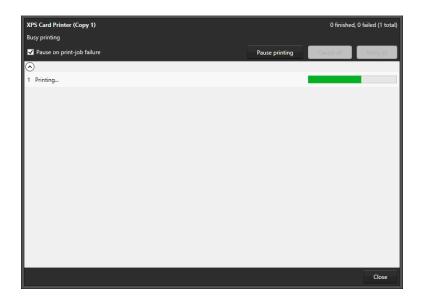
🖴 test11 - PrintStudio					
File Share Edit Rec	ord Options View Help				
	<   🄊 🕐   📾	■ ¥ \$\$			
ID	First name	Last name Print selected records with	Number of cards	Card status	
11111	Mark	Smith		No card	

A. A print window appears, and you can select the printer you installed for the card printing process. This manual does not describe the installation of printers. Please refer to the Zebra Card Printer manuals for further information on these devices. After you select the printer you click on the "Print" button.



Example printer setup window.

B. A print progress window will pop up that will show you the progress of the cards that are being printed.



# PrintStudio Database Connection



# **PrintStudio** Database Connection

PrintStudio Project with database connection allows users to connect with external databases, and use the data to complement their local project, or even base the entire project upon. There are four types of databases supported:

- Microsoft SQL Server
- Microsoft Access files
- MySQL Server
- Oracle Server

Choosing from one of these four settings is highly recommended, however it is also possible to connect to a database through an ODBC driver. Connecting with one of the supported databases allows you to make full use of the database's functionality. For example: PrintStudio will automatically lock tables when adding or updating records, it will automatically detect user rights and allows you to work with views.

Connecting with a data source through an ODBC driver provides you with more basic functionality, but it will suffice for most single-user environments. PrintStudio projects with database connection will automatically detect any available ODBC drivers on the system, if the required ODBC driver is not listed, it can be installed using the Microsoft update website or tool in your operating system.

# Note: CardStudio<sup>™</sup> 2.0 does not create an external database for you, it only creates a connection to an existing external database.

The screenshot below shows the Project Settings dialog, where the option for PrintStudio projects with an external database connection will be present depending on the CardStudio Edition you purchased.

Project settings					×
<ul> <li>General settings</li> <li>Detail view</li> </ul>	Data sources				
Gallery view Biometric settings Card designs	Add data source	Data		[	Remove table
Card design assignment Project structure Triggers Manage project Æxternal databases Data sources		Access rights: Read data	🖌 Edit data 🗹	Create rows ✔ Delete ro	ows
		Table linking:	e		
Image sources Card encoding Encoding settings			nn that uniquely i	dentifies each row and link	it to a unique
		Link: IDnumb	er ~ to: Ima	ges 🖌 id 🖌	
		Column name	Туре	Display name	Read Write
		IDnumber	Whole number	IDnumber	
		Firstname	Text	Firstname	
		Surname	Text	Surname	
		Layout	Text	Layout	
		Function	Text	Function	
		PlaceOfBirth	Text	PlaceOfBirth	<ul> <li></li></ul>
	Add table			1	Refresh table
				Save	e Cancel

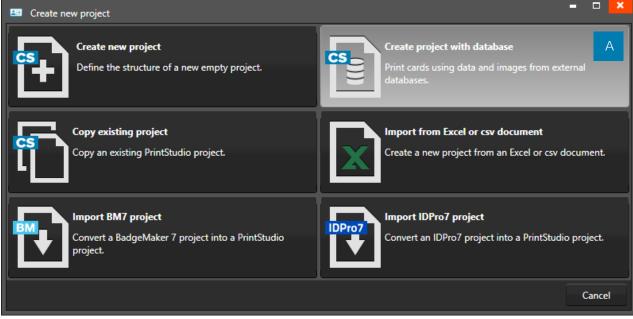


# Setting up a PrintStudio Database connection

#### How to set up a PrintStudio Project with Database connection

Follow these steps if you want to create a project using an external data source as your primary source of information. Start by creating a new project.

A. Click the New Project icon and select "Create project with database" from the dialog.



Example of a New Project pop-up window: Create project with database.



Connect with database

💴 Create PrintStudio d	database project					= 🗆 🗙
1 Data sources	Image sources	3 View configuration	(4) Triggers (5)	Create project		
Data sources						2
Enter a name for your	project and specify	in which databases and ta	bles your data is sto	red.		×
Project name: Demo	project with databas	e connection		Α		
Add data sourc B	Microsoft SQL S	erver	_		Remove	data source
SQL Server	Туре:	Microsoft SQL Server	С			Ŷ
	Server:	TESTServer				
	Port:	1433		D		
	Database name:	SQL Server				
	Use Windows	authentication				
	Username:	Testuser				
	Password:	•••••				
					E Test	connection
Add table F						
				Previous step	Next step	Cancel

Example of a new PrintStudio Project with external database connection step 1: data sources.

- A. Enter the name of your New PrintStudio project with database connection.
- B. Click on the "Add data source" to connect the database with your external database.
- C. Select the type of database you would like to connect with. Different types of databases are supported:

Configuring a Microsoft SQL Server data source

After selecting Microsoft SQL Server as the type of data source, you can fill in all information required to connect to the server.

D. Server: Path or IP address to the server. If the server is hosted on another system in the network, it can be either addressed as \\servername or the IP address of the server. Information such as the database name, username and password, in most cases are provided by your database administrator. *Note: to be able to work with a Microsoft SQL Server, an active network connection must be available.* 

Configuring a Microsoft Access data source

To define a Microsoft Access data source, select the option from the drop-down list, and find the path to your database by choosing the Browse ("...") button behind the Filename field.

Please note that a username and password may not be required for your Microsoft Access file, in which case these fields can be left empty.

Microsoft /	Access	Remove data source
Туре:	Microsoft Access	*
Filename:	C:\Users\Margriet\OneDrive - ScreenCheck bv\Marketing Laptops\7. Test Date	a\BM 7 project\DEM
Username:		
Password:		
		Test connection



Configuring a MySQL or Oracle data source

Configuring a MySQL or Oracle server as a data source is done the same way as defining a Microsoft SQL Server data source.

Server: Path or IP address to the server. If the server is hosted on another system in the network, it can be either addressed as \\servername or the IP address of the server.

Oracle		Remove data source
Туре:	Oracle	~
Server:	TESTServer	
Port:	1433	
SID:	Oracle	
Username:		
Password:		
		Test connection

Port: Databases have a standard or adjusted port number. PrintStudio uses the standard port number when the input field is left empty. Information such as the port number, database name, username and password, in most cases are provided by your database administrator.

Note: to be able to work with a MySQL or Oracle Server, an active network connection must be available.

Configuring a data source through an ODBC driver

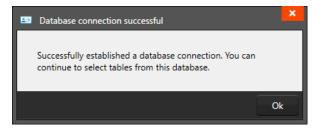
After selecting ODBC as the type of data source, select one of the ODBC drivers installed on your system. Please note that Windows may have more than one driver installed per file extension.

After selecting the driver, you can provide a direct path to your database file. This can be a local path (C:\Example\Example.mdb) or a remote path (\\Server\Example\Example\Example.mdb).

Note: To be able to open your project using a remote directory, an active network connection must be available.

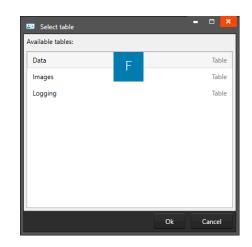
E. After configuring the data source, click the button "Test connection". Once the pop-up reports "Database connection successful" you can proceed. If the connection cannot be established, the dialogue will report a detailed overview of the problem. Check all information and make sure a connection with the external server is available before trying again.

ODBC		Remove data source
Туре:	ODBC	v
✓ Use a custom O	DBC connection string	
ODBC DSN:		v
ODBC driver:		~
Connection string:	Microsoft Access-Treiber (*.mdb)	<u>_</u>
	Microsoft dBase Driver (*.dbf) Microsoft dBase-Treiber (*.dbf)	
	Microsoft Excel Driver (*.xls)	
	Microsoft Excel-Treiber (*.xls)	
	Microsoft ODBC for Oracle	
	Microsoft Paradox Driver (*.db )	
	Microsoft Paradox-Treiber (*.db )	
	Microsoft Text Driver (*.txt; *.csv)	
	Microsoft Text-Treiber (*.txt; *.csv)	



F. Once the connection is established, click "Add table" to continue configuring your data source. A pop-up dialogue will list all tables available for you.

Microsoft SQL Server will likely only list database tables, where other files (such as MS Access databases) might also list tables otherwise invisible to the user.





Configure the database tables for the project

💷 Create PrintStudio da	atabase project			= = ×
1 Data sources	2 Image sources	View configure	ration () Triggers () Create project	
Data sources				0
Enter a name for your p	project and specify	in which databa	ses and tables your data is stored.	×
Project name: Demo pr	roject with databas	se connection		
Add data source	Data			Remove table
DEMO6400.MDB     Data	Table linking: Table linking: Primary table Select the column	B In that uniquely i	Create rows  Create rows	
	Column name	Туре	Display name	Read Write
	IDnumber	Whole number	IDnumber	
	Firstname	Text	Firstname	
	Surname	Text	Surname	
	Layout	Text	Layout	
	Function	Text	Function	
Add table	PlaceOfBirth	Text	PlaceOfBirth	F Refresh table
			Previous step	G ext step Cancel

- A. After selecting a table, you can configure the rights to the table, and to each of the listed columns in the table. Users connecting with a Microsoft SQL Server can create and remove rows, whereas users connecting through an ODBC database will only be able to select the "Edit data" checkbox for existing rows.
- B. The newly created data source will have the "Primary table" checkbox checked. This setting can only be altered during the process of defining the data sources, so make sure that the primary table is correctly configured.
- C. For a primary table, you can define the "ID column" this is a column containing unique, numeric data. For secondary tables, you must define its relation to the primary table or to one of the tables linked to the primary table. This means that each table will have to contain a column containing a corresponding type and kind of data. It is advised to keep the column marked as "ID column" as read-only or even hidden if the data in the column is not crucial to users working with the data grid.
- D. Edit the display names of the column as you see fit for your PrintStudio Project.
- E. The list of columns can be used to define certain restrictions to each column such as "Read" or "Write". By default, columns will be marked as "Read". Think carefully about what data to manage through PrintStudio, and what data should be managed by other external systems.
- F. Click on the "Refresh table" to make sure that all the data loaded from the database table is up to date.



- G. Click on the "Next step" and finish the next steps and create the project. With the second step you can define the image sources for Passport Photos and Signatures in your project. You can choose from three different options:
  - 1. Read image from local project

Selecting this option stores captured images along with the CardStudio Identity project files. This option can be used to capture new image data.

- Read or download image from path or URL This option allows you to read images from a remote directory either on a server or on a network drive. This can only be used to *read* image data. New data cannot be captured.
- 3. Read image from database (blob)

This allows you to read an image from a specific column in the databased marked as BLOB (Binary Large Object) This option can be used to both read existing data and capture new image data to the database.

#### Changes when working with PrintStudio with external database connection

There are a couple of changes that may be noticeable when working with PrintStudio connecting to an external database in comparison to regular PrintStudio projects.

#### Loading times

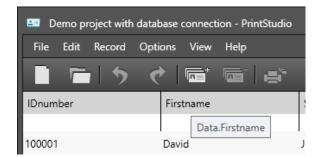
The time it takes to load your project, or to process changes to your database may increase. This is due to the time it takes to transfer data over the network, login to the database or retrieve data from the external data sources.

#### Grayed-out columns

Columns that have been marked as "read only" will have a grey background color when selected. It simply means that you will not be able to alter data for that specific column.

#### Data from local or external database

When working with multiple data sources, it can become confusing to remember what information belongs to what data source. In order to clarify, PrintStudio labels sources with <table\_name>.<column\_name>. This means that a column "Firstname" coming from a table called "Students" will be displayed as "Students.Firstname". In the project this will display when hovering over a column name.



#### Updating or adding pictures

Depending on the read or write access restrictions and the configuration of image sources in your project, you may or may not be able to add new images.

#### Project has stopped working

PrintStudio cannot prevent external data sources from changing. If a file gets removed, or a database gets changed, it might cause your PrintStudio project to stop working. Always consult with your database administrator to ensure that data you need in your PrintStudio Project is made redundantly available to you.

#### Default values

When creating a new project, or when altering a project structure, you can define certain default values for your column types. However, when using PrintStudio with an external database connection, these default values will be only filled for new records or when manually entering the information into the field. The reason for this is because the local project data does not contain the same amount of records as the external sources, and new records are never created automatically.



# PrintStudio Encode



# **PrintStudio** Encode

CardStudio Encode allows you to encode data from your PrintStudio project onto a smart card. With CardStudio Encode, CardStudio introduces a new file format that is used to contain all information related to the encoding of the card, which can easily and securely be shared with other parties who collaborate on the same project.

### Contactless Encoding

CardStudio Encode currently supports the encoding of MIFARE Classic, Plus and DESfire cards. Encoding is done using card printers that are fitted with a "reader" such as the HID Omnikey or the Springcard Crazy Writer.

## SmartCard Editor

The SmartCard Editor is a tool that is made available to all users of the CardStudio software package. This tool allows you to create an encoding template for MIFARE Classic, Plus and DESfire cards using all the major features for each of the standards.



## Creating a MIFARE Classic Template using the CCI Editor

Launch the SmartCard Editor, which will open to a blank window. Choose "File"  $\rightarrow$  "New"  $\rightarrow$  "Mifare Classic (1k)" or "Mi

File	Help			<u>F</u> ile <u>H</u> elp	
	New	•	Mifare Classic (1K)	Mifare Classic (1K)	
	Open	Ctrl+O	Mifare Classic (4K)		
	Import	•	Mifare Plus (2K) Mifare Plus (4K)	<ul> <li>Card settings</li> </ul>	
	Close		Desfire	Card serial number byte order: Mos	ist significant byte first (mirrored)
	Save	Ctrl+S		Enable MAD (Mifare Application D	Directory)
	Save As				
	Exit	Alt+F4		Sector 0 A Sector	0
					lude sector in CCI
				Descrip	ption:
				Sector 2	
				Sector 3	ctor access settings (security)
				Sector 4 Key A:	
				Sector 5 Key B:	
				Sector 6 Block (	0: Type: Data Read: Key A & B Write: Key B (Manufacturer block, read-only)
				Sector 7	
				Sector 8	1: Type: Data Read: Key A & B Write: Key B
				Block 2 Sector 9	2: Type: Data Read: Key A & B Write: Key B 🛛
				Block 3	3: Key A Access area Key B Read: None Write: Key B Read: Key A & B Write: Key B Read: None Write: Key B (trailer)
				Sector 10	Read: None Write: Key B Read: Key A & B Write: Key B Read: None Write: Key B
				Sector 11 Access	s settings: 78 77 88 00 (byte representation of above settings)
				Sector 12	
				Sector 13	data
				Data	block v <
				Created new CCI	



<u>File</u> Help	
Mifare Classic (4K)	
○ Card settings	
Card serial number byte order: Most significant byte first (mirrored) ~	
Enable MAD (Mifare Application Directory)	
Sector 0	5
Sector 0 Sector 1 Sector in CCI B	
Description:	
Sector 2 F	5
Sector 3	
Sector 4 Key A: 74804E7EC6F9 Generate key	
Sector 5 Key B: 0FF324457332 Generate key Sector 6 Disch 0 The sector and the sector biological data and the sector biologic	
Sector 0 Block 0: Type: Data Read: Key A & B Write: Key B (Manufacturer block, read-only)	
Sector 8	
Sector 9 Block 2: Type: Data Read: Key A & B Write: Key B  Sector 9	
Sector 10 Block 3: Key A Access area Key B Read: Key A & B Write: Key B Read: None Write: Key B V (trailer)	
Sector 11 Access settings: 78 77 88 00 (byte representation of above settings)	
Sector 12	
Sector 13 Sector data	
Sector 14 Data block	
Sector 15 Dynamic data × Add	
Sector 16 Format: ASCII V Left-aligned V Field: Firstname	1
Sector 17 Length: 8 bytes Description: Firstname, 8 bytes	
Sector 18 Format: ASCII × Left-aligned × Field: Lastname	8
Sector 19 Length: 8 bytes Description: Lastname, 8 bytes V	
Sector 20	
Sector 21	
Sector 22	
Sector 23 V Format: Numeric V Right-aligned V Field: 12345678	>
Created new CCI	

- A. The Card Settings are displayed on top of the screen. You can define whether the card should use MAD Sectors (Mifare Application Directory documents directory-like structure that describes how sectors on card are used) or not. Enabling this setting will have an impact on specific sectors and their contents. It will also automatically generate Key A for sector 0 (and sector 16 for 4K cards).
- B. Description of the sector.
- C. Define keys, determine read and write settings for each of the four data blocks.
- D. Create data segments to fill the available space.
- E. The CCI Editor visualizes any data that will be encoded onto the Smart Card to give the user a better view of the amount of used and available space in each sector. Certain blocks (such as Block 0 on Sector 0, and the Trailer Block on all sectors) are reserved for manufacturer information and storing keys. These are not available to the user and are displayed as hatched.

Each square represents one byte of information. When adding sector data, the length of the data is visualized on the right. Each item in the list is given a slightly different color to make it easier to understand how the data is transferred to the card.

F. List of sectors is displayed, 16 for 1K cards, 40 for 4K cards. Depending on the settings, each of the sectors can contain information that will be encoded onto the card using PrintStudio.



#### Information about Sector Data

Sector data
Data block
Dynamic data 🎽 🛛 Add
Format: ASCII × Left-aligned × Field: Firstname
Length: 8 bytes Description: Firstname, 8 bytes
Format: ASCII × Left-aligned × Field: Lastname
Length: 8 bytes Description: Lastname, 8 bytes
Format: Numeric Y Left-aligned Y Field: ID
Length: 4 bytes Description: Employee Number
Format: Numeric Y Right-aligned Y Field: 12345678

## Dynamic Data

This is information that will be added to the card by your CardStudio project. Like adding card designs, when you add a CCI file to your project, a pop-up will allow you to bind columns in your project to each of these items. You must always ensure that the data in your project corresponds with the settings you have chosen in terms of length and data type. The following data types are available.

- ASCII 0
- Numeric 0
- Alphabetic 0
- Alpha-numeric 0
- Alphabetic and special 0
- 0 Alpha-numeric and special
- Binary-coded decimal (5) 0
- Binary-coded decimal 0
- Binary-coded decimal date 0
- Decimal 0
- Wiegand-26 0
- Hexadecimal 0
- 0
- 0

- All standard ASCII characters are allowed.
- 0...9 A ... Z and a ... z
- A ... Z, a ... z and 0 ... 9
- A...Z, a...z and Punctuation marks
- A...Z, a...z, 0...9 and Punctuation marks
- 0 ... 9, two digits in one byte, maximum 5 bytes
  - 0 ... 9, two digits in one byte
- YYYYMMDD each two digits in one byte
  - 0.00 (Fixed point)
- Facility and card codes with parity
- 0123456789ABCDEF 012345678
- Octal
- Binary

In addition, you can add a description of the sector data to remind you of certain agreements.

01

#### Constant Data

Constant or Static data is data that is manually entered in the CCI file and will never change. The format of this piece of information can be of any of the types mentioned in the Dynamic Data section.

#### **Empty Space**

This item can be used to indicate a specific part of a sector that will never be used.

# Card serial number

This is a 10, 7 or 4-byte, data section which will automatically contain the card serial number when the card is being encoded.

Using these options, you can create any type of CCI file. Once completed, you can save your work in either an unencrypted file (XML) or an encrypted CCI file. If you choose the latter option, you will be required to enter a password that will also be required when adding the CCI file to your CardStudio Identity project.



#### Creating a MIFARE DESfire template using the CCI Editor

DESfire cards take an entirely different approach to encoding compared to MIFARE Classic or Plus cards. With DESfire, you can define Applications and Files that contain information, each with specific access settings. Similar to MIFARE Classic, launch the SmartCard Editor, which will open to a blank window. Choose "File"  $\rightarrow$  "New"  $\rightarrow$  "DESFire".

A. The Card settings panel will allow you to define general rules for your encoding template. A DESFire card features a Card master key that can be used to re-encode or erase the card at any time. All keys for DESFire cards can be encoded using 3DES, 3K3DES or AES encrypted keys. A key can be either generated or entered manually.

The other options for the Card settings dialog are self-explanatory but must be decided with caution as they will impact how flexible the card can be used after being encoded. In addition to the default DESFire features, reset keys are implemented that allow for cards to be repurposed, by users even though the Card master key might not be available. Distributing the Card master key might not be desirable because of possible security liabilities. Multiple Reset keys can be created to supply to different vendors.

File Help	
Desfire	
	t byte first (mirrored) ~ 5011B697DB9314799B68169B2 0 Generate key ng applications
<ul> <li>Reset keys</li> <li>Reset keys are not a Desfire feature, but they allo</li> <li>Add key</li> </ul>	w our encoding software to repurpose existing cards.
Application 000001	Application Settings  Description A sample DESfire application  Application ID 000001  Encryption type AES      AES      C      Master key can be changed      Authentication required for directory access      Authentication required for file creating / deleting      Key settings can be changed  Change key settings Authenticate with application master key      Enable ISO file ID support  Iso file ID  DF name
Add application Remove application Add file Remove file	Application keys  Add key  C9F762F37206E0F07C701975F448CFD0  Generate key X

B. Once Card settings have been defined, an application can be created by choosing "Add application" on the bottom left of the screen. Doing so will automatically create an application titled "000001".

C. On the right side of the screen, information can be entered to define the Application such as a Description, an ID (Hexadecimal value) and the Encryption type. For each application, settings are available that define future use of the application such as allowing the Master key to be changed or Authentication settings for accessing the data in the application.

D. Each application can have up to 10 keys that can be distributed to vendors for use of the application.



- E. Once finished, choose "Add file" to create a file named "File 0" for the currently selected application.
- F. Each file will contain a Description and a File number. Communication mode determines the way in which the file can exchange data. It is highly recommended to use the Encrypted setting, as the Plain (unencrypted) mode should only be used for data that does not contain sensitive information. All DESFire file types are supported to accommodate integration with access control or payment systems that support the DESFire standard. For general purposes, select the "Standard data file" from the dropdown list. Each file has individual settings for Read, Write and Read/Write access, as well as an access rule for changing these settings after encoding the card.
- G. Standard file types require you to set the total file size. Keep in mind that this must be equal to or greater than the total amount of bytes that are used by your file data. In our example, the total amount of data used is 42 bytes, but the file is given 64 bytes instead.

📧 Untitled* - Sma	tCard Editor v1.4	-	×
<u>F</u> ile <u>E</u> dit <u>H</u> elp			
Desfire			
Card settings			
-			
Card serial numbe		·	 
Card master key:	AES ~ 0000000	000000000000000000000 LSB Generate key	
	No key diversification $\ ^{\vee}$		
Master key ca	n be changed later	Disable card formatting	
	required for directory access	Enable random card ID	
	required for creating / deleting	applications	
Card configura	ition can be changed later		
Reset keys			
	a Decfine feature, but they allow	our encoding software to repurpose existing cards.	
Add key	a Desirie reature, but they allow	our encouning software to repurpose existing cards.	
Add key			
Application 0	20001	File settings         Description         File number         0         Communication mode         Plain (unencrypted)         File type         Standard data file         Read access         Authenticate with application master key         Write access         Authenticate with application master key         Read/write access         Authenticate with application master key         Change settings access	
		ISO file ID	
		Type specific settings File size 0	6
	Remove application	Sile data       Empty space ▼     Add	
E lew CCI			

H. File data is added to the File in a similar fashion to defining MIFARE Classic or Plus templates. Select a data type from the dropdown box and choose "Add" to create a new data block. Define the data format and alignment, as well as the field as this will be the identifier once the CCI file is linked to your PrintStudio project.

Constant data v Add Empty space Dynamic data Constant data Constant data:	
Dynamic data Left-aligned Constant data:	
Constant data iption:	×
Constant data iption:	
ipuon:	^
Card social number	$\sim$
card senai number	
Encoding:   Windows-1252 V	

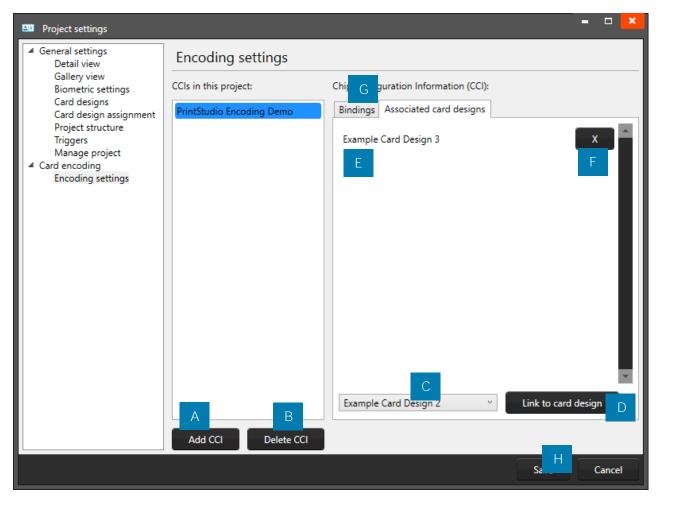
Each DESFire template can contain a maximum of 32 applications, and each application can contain a maximum of 32 files.

Once completed, the template can be either saved to a human-readable XML format, or a password-encrypted CCI format. Both can be used to encode cards in your CardStudio Identity project.

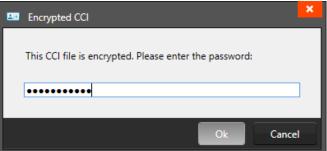


# Encoding with PrintStudio

Encoding with CardStudio Identity has been fully integrated into the printing process. The most important step to enable encoding for your project is to add your CCI file to your project. Go to the Project Settings panel, and select Encoding Settings from the Card encoding tab.



A. Click on the "Add CCI" button and select the CCI-file you created with the CCI-editor and want to add to your CardStudio project to connect to the card designs. When your CCI-file has been secured with a password you first have to fill in the correct password before the file is added to your project.



- B. When you added the wrong CCI-file or want to delete an old file you can select the file from the list and click on the "Delete CCI" button to delete the CCI-file from your project.
- C. Select the CCI-file from the list and like to connect to a card design, then select the card design from the drop-down list.
- D. Click on the "Link to card design" to link the card design to the CCI-file. Card holder Records with this card design will be encoded with CCI-file linked to the card design.
- E. Overview of all the card designs connected to the CCI-file.
- F. Click on the "X" button to unlink a card design from the CCI-file.



- G. You can bind dynamic data fields from your CCI-file to the data columns of your project just by clicking on the "Bindings" tab and selecting one of the data columns from the drop-down menu.
- H. Click on the "Save" button to save the bindings and CCI files connected to your project card designs. You are now ready to encode your cards. Select the records connected to the correct card design/CCI-file and click on the print button.

Note: You might need to configure your printer to perform both Encoding and Printing tasks at the same time, otherwise PrintStudio might list your print action as failed, even though encoding did take place.

#### Supported standards

CardStudio Encode currently supports MIFARE Classic, MIFARE Plus and MIFARE DESFire standards.

